Connecting via Winsock to STN

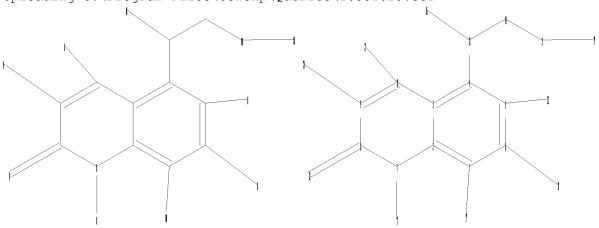
Welcome to STN International! Enter x:x

FILE 'HOME' ENTERED AT 15:12:50 ON 20 JUL 2009

=> file reg

=>

Uploading C:\Program Files\Stnexp\Queries\10552023.str



chain nodes :

 $11 \quad 12 \quad 13 \quad 14 \quad 15 \quad 16 \quad 17 \quad 18 \quad 19 \quad 20 \quad 21 \quad 22$ 

ring nodes :

1 2 3 4 5 6 7 8 9 10

chain bonds :

 $1-17 \quad 4-13 \quad 5-22 \quad 6-18 \quad 7-11 \quad 8-12 \quad 9-20 \quad 10-21 \quad 13-14 \quad 13-16 \quad 14-15 \quad 15-19$ 

ring bonds :

1-2 1-6 2-3 2-7 3-4 3-10 4-5 5-6 7-8 8-9 9-10

exact/norm bonds :

1-17 2-7 3-10 7-8 8-9 8-12 9-10 13-16 14-15

exact bonds :

4-13 5-22 6-18 7-11 9-20 10-21 13-14 15-19

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:Atom 20:CLASS 21:CLASS 22:CLASS

#### L1 STRUCTURE UPLOADED

=> d 112

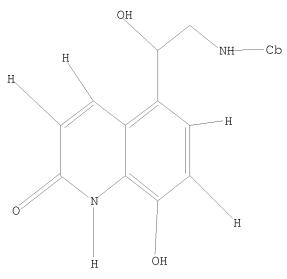
L12 NOT FOUND

The L-number entered has not been defined in this session, or it has been deleted. To see the L-numbers currently defined in this session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> d 11

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11 sam

SAMPLE SEARCH INITIATED 15:13:27 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 593 TO ITERATE

100.0% PROCESSED 593 ITERATIONS 6 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 10399 TO 13321

PROJECTED ANSWERS: 6 TO 266

L2 6 SEA SSS SAM L1

=> d scan

L2 6 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN

IN 2(1H) -Quinolinone, 5-[(1R)-2-[[2,3-dihydro-2-[(4-methoxyphenyl)methyl]-1H-inden-2-yl]amino]-1-hydroxyethyl]-8-hydroxy-

MF C28 H28 N2 O4

Absolute stereochemistry.

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> s 11 full

FULL SEARCH INITIATED 15:13:34 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 11613 TO ITERATE

187 ANSWERS

100.0% PROCESSED 11613 ITERATIONS

SEARCH TIME: 00.00.02

L3 187 SEA SSS FUL L1

=> file ca

=> s 13

L4 85 L3

=> s 14 and py>2003 5673999 PY>2003

L5 78 L4 AND PY>2003

=> file reg

=>

Uploading C:\Program Files\Stnexp\Queries\552023.str

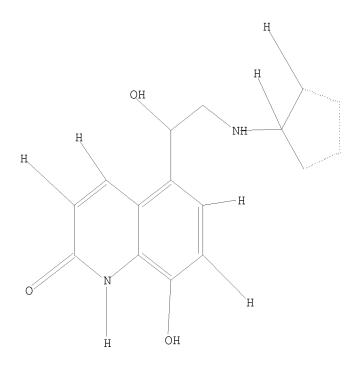
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chain nodes :
11 12 13 14 15 16 17 18 20 21 22 27 28
ring nodes :
1 2 3 4 5 6 7 8 9 10 19 23 24 25 26
chain bonds :
1-17 \quad 4-13 \quad 5-22 \quad 6-18 \quad 7-11 \quad 8-12 \quad 9-20 \quad 10-21 \quad 13-14 \quad 13-16 \quad 14-15 \quad 15-19 \quad 19-27
23-28
ring bonds :
1 - 2 \quad 1 - 6 \quad 2 - 3 \quad 2 - 7 \quad 3 - 4 \quad 3 - 10 \quad 4 - 5 \quad 5 - 6 \quad 7 - 8 \quad 8 - 9 \quad 9 - 10 \quad 19 - 23 \quad 19 - 26 \quad 23 - 24 \quad 24 - 25
 25-26
exact/norm bonds :
1-17 \quad 2-7 \quad 3-10 \quad 7-8 \quad 8-9 \quad 8-12 \quad 9-10 \quad 13-16 \quad 14-15 \quad 15-19 \quad 19-23 \quad 19-26 \quad 23-24
24-25 25-26
exact bonds :
4-13 5-22 6-18 7-11 9-20 10-21 13-14 19-27 23-28
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6
```

# Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:Atom 20:CLASS 21:CLASS 22:CLASS 23:Atom 24:Atom 25:Atom 26:Atom 27:CLASS 28:CLASS

# L6 STRUCTURE UPLOADED

=> d 16 L6 HAS NO ANSWERS L6 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 16 full

FULL SEARCH INITIATED 15:15:50 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 1111 TO ITERATE

100.0% PROCESSED 1111 ITERATIONS 130 ANSWERS

SEARCH TIME: 00.00.01

L7 130 SEA SSS FUL L6

=> file ca

=> s 17

L8 76 L7

=> d ibib abs fhitstr 1-76

L8 ANSWER 1 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 151:69382 CA

TITLE: Benefit-risk assessment of long-acting

 $\beta\text{-adrenergic}$  and ultra long-acting

 $\beta$ -adrenergic agonists

AUTHOR(S): Cazzola, Mario; Loetvall, Jan Olof; Matera, Maria

Gabriella

CORPORATE SOURCE: Respiratory Medicine, Department of Internal Medicine,

Unit of Respiratory Diseases, University of Rome Tor

Vergata, Rome, Italy

SOURCE: Asthma: Current Treatments (2007), 17-29. Editor(s):

Polosa, Riccardo; Holgate, Stephen T. Clinical

Publishing: Oxford, UK.

CODEN: 69LHXY; ISBN: 978-1-84692-015-8

DOCUMENT TYPE: Conference; General Review

LANGUAGE: English

AB A review on enantiomers of long-acting  $\beta\text{-agonists}\text{,}$  ultra long-acting

 $\beta$ -agonists under development, and other long-acting  $\beta$ -agonists.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(inhaled corticosteroid in combination with long-acting  $\beta\text{-adrenergic}$  agonist or ultra-long-acting  $\beta\text{-adrenergic}$ 

agonist could be useful in patient with asthma and chronic obstructive

pulmonary disease)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 93 THERE ARE 93 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 151:63853 CA

TITLE: Process for producing drug particles smaller than ten

microns in size

INVENTOR(S): Muhrer, Gerhard; Kieckbusch, Thomas; Singh, Dilraj;

Thakur, Ranjit; Schaffluetzel, Kurt; Rasenack, Norbert

PATENT ASSIGNEE(S): Novartis A.-G., Switz. SOURCE: PCT Int. Appl., 21pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND DATE	APPLICATION NO.	DATE
WO 2009074666	A1 20090618	WO 2008-EP67364	20081211
W: AE, AG, AL	, AM, AO, AT, AU,	AZ, BA, BB, BG, BH, BR,	BW, BY, BZ,
CA, CH, CN	, CO, CR, CU, CZ,	DE, DK, DM, DO, DZ, EC,	EE, EG, ES,

FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: EP 2007-123165 A 20071213 AB A process of preparing a particulate and substantially crystalline drug substance.

The process involves suspending a substantially crystalline drug substance in an anti-solvent to give a suspension, homogenizing the suspension at elevated pressure to give drug particles that have a mean particle size of less than about 10  $\mu\text{m}$ , and drying the drug particles to remove any residual anti-solvent.

IT 312753-06-3D, Indacaterol, salts

RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(process for producing drug particles smaller than ten microns in size)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 150:555861 CA

TITLE: Use of CRTH2 antagonist compounds

INVENTOR(S): Hunter, Michael George; Pettipher, Eric Roy; Perkins,

Colin Michael; Payton, Mark Anthony; Xue, Luzheng

PATENT ASSIGNEE(S): Oxagen Limited, UK SOURCE: PCT Int. Appl., 51pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

CN

## PATENT INFORMATION:

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			FI,	GB,	GD,	GE,	GH,	GM,	GΤ,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,
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2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-

yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 4 OF 76 CA COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 150:555858 CA Use of CRTH2 antagonist compounds TITLE: Hunter, Michael George; Pettipher, Eric Roy; Perkins, INVENTOR(S): Colin Michael; Payton, Mark Anthony; Xue, Luzheng PATENT ASSIGNEE(S): Oxagen Limited, UK SOURCE: PCT Int. Appl., 51pp. CODEN: PIXXD2

#### 10/552,023

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATI	PATENT NO.				KIN	D	DATE		1		ICAT		NO.		D.	ATE	
WO 2	2009	 0632	02		A2		2009	0522	1						2	 0081	 113
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		FI,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,
		KG,	KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,
		ME,	MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,
		PL,	PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	ST,	SV,	SY,	ТJ,
		TM,	TN,	TR,	TT,	ΤZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW		
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		ΑM,	ΑZ,	BY,	KG,	KΖ,	MD,	RU,	ΤJ,	TM							
VTTQ	ADD	T N	TNFO						1	CB 2	0.07 -	2220	3		Δ 2	0071	112

PRIORITY APPLN. INFO.: GB 2007-22203 A 20071113

OTHER SOURCE(S): MARPAT 150:555858

AB The invention relates to CRTH2 antagonist compds. which are useful in the treatment of allergic conditions, wherein the treatment is by pulsed therapy which comprises a first period during which the compound is administered to the patient and a second period of at least seven days during which the compound is administered to the patient in a reduced amount IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(use of CRTH2 antagonists)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 5 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 150:539583 CA TITLE: Preparation of

5-[(3,3,3-trifluoro-2-hydroxy-1-arylpropyl)amino]-1H-

quinolin-2-ones as antiinflammatories.

Berger, Markus; Rehwinkel, Hartmut; Zollner, Thomas; INVENTOR(S):

May, Ekkehard; Hassfeld, Jorma; Schaecke, Heike

PATENT ASSIGNEE(S): Bayer Schering Pharma Aktiengesellschaft, Germany;

Astrazeneca AB

SOURCE: PCT Int. Appl., 70pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PA	PATENT NO.					D				APPL	ICAT	ION I	NO.				
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		KG,	KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,
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								UG,								•	•
	RW:		•	•			•	DE,		•	•	•	•	•		HR,	HU,
							•	MC,		•							
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EP	2062	880	•	•	A1	·	2009	0527		EP 2	007-	7601	9		2	0071	122
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PRIORIT	Y APP	LN.	INFO	. :	,					EP 2	007-	7601	9		A 2	0071	122
	RIORITY APPLN. INFO.: THER SOURCE(S):																
GI		•															

$$R^{5}$$
 OH CF3  $R^{2}$  NH  $R^{2}$   $R^{4}$   $R^{4}$   $R^{4}$   $R^{4}$   $R^{5}$   $R^{6}$   $R^{7}$ 

AΒ Title compds. [I; R1, R2 = H, OH, halo, cyano, NO2, perfluoroalkyl, (substituted) alkyl, alkoxy, alkylthio; R1R2 = O(CH2)pO, OCH:CH, , NHN:CH, etc.; p = 1, 2; R3 = H, OH, halo, cyano, perfluoroalkyl, (substituted) alkyl, alkoxy, alkylthio; R4 = H, halo, OH, perfluoroalkyl, alkyl, alkoxy,

GΙ

alkylthio, cyano, NO2, amino, etc.; R5 = (halo)alkyl, alkenyl, alkynyl, cycloalkylalkyl, cycloalkylalkenyl, heterocyclylalkyl, heterocyclylalkenyl, alkylthio, alkylsulfonyl, cyano, halo, amino, etc.], were prepared Thus, 5-[[1-(2-chloro-3-fluoro-4-methoxyphenyl)-3,3,3-trifluoro-2-hydroxy-2-(methoxymethyl)propyl]amino]-7-fluoro-1H-quinolin-2-one (preparation given) bound to the glucocorticoid receptor with IC50 = 3.1 nM.

IT 312753-06-3

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (coadministration; preparation of

trifluorohydroxyarylpropylaminoquinolinones as antiinflammatories)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 150:539582 CA TITLE: Preparation of

5-[(3,3,3-trifluoro-2-hydroxy-1-arylpropyl)amino]-1H-

quinolin-2-ones as antiinflammatories.

INVENTOR(S): Berger, Markus; Rehwinkel, Hartmut; Schaecke, Heike;

May, Ekkehard; Zollner, Thomas; Hassfeld, Jorma

PATENT ASSIGNEE(S): Bayer Schering Pharma Aktiengesellschaft, Germany;

Astrazeneca AB

SOURCE: Eur. Pat. Appl., 34pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT	NO.			KIN	D	DATE			APPL	ICAT	ION I	NO.		D	ATE	
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EP 2062	EP 2062880			A1		2009	0527		EP 2	007-	7601	9		2	0071	122
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	IS,	IT,	LI,	LT,	LU,	LV,	MC,	MT,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,
	AL,	BA,	HR,	MK,	RS											

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WO 2008-EP9440
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PRIORITY APPLN. INFO.:
                                            EP 2007-76019
                                                                    20071122
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                                                                    20071126
                                                                 Р
GΙ
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AB Title compds. [I; R1, R2 = H, OH, halo, cyano, NO2, perfluoroalkyl, (substituted) alkyl, alkoxy, alkylthio; R1R2 = O(CH2)pO, OCH:CH, , NHN:CH, etc.; p = 1, 2; R3 = H, OH, halo, cyano, perfluoroalkyl, (substituted) alkyl, alkoxy, alkylthio; R4 = H, halo, OH, perfluoroalkyl, alkyl, alkoxy, alkylthio, cyano, NO2, amino, etc.; R5 = (halo)alkyl, alkenyl, alkynyl, cycloalkylalkyl, cycloalkylalkenyl, heterocyclylalkyl, heterocyclylalkenyl, alkylthio, alkylsulfonyl, cyano, halo, amino, etc.], were prepared Thus, 5-[[1-(2-chloro-3-fluoro-4-methoxyphenyl)-3,3,3-trifluoro-2-hydroxy-2-(methoxymethyl)propyl]amino]-7-fluoro-1H-quinolin-2-one (preparation given) bound to the glucocorticoid receptor with IC50 = 3.1 nM.

IT 312753-06-3, Indacaterol

IT 312753-06-3, Indacaterol
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (coadministration; preparation of
 trifluorohydroxyarylpropylaminoquinolinones as antiinflammatories)
RN 312753-06-3 CA
CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 150:480748 CA

TITLE: Organic compounds for treatment of an inflammatory or

obstructive airways disease

INVENTOR(S): Fairhurst, Robin Alec PATENT ASSIGNEE(S): Novartis AG, Switz. SOURCE: PCT Int. Appl., 50pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PAT	PATENT NO.					D	DATE			APPL	ICAT	ION I	.00		D.	ATE	
	WO	2009	0501	98		A2		2009	0423	,	WO 2	008-	EP63	869		2	0081	015
		W:	ΑE,	AG,	AL,	AM,	AO,	ΑT,	ΑU,	ΑZ,	BA,	BB,	BG,	BH,	BR,	BW,	BY,	BZ,
			CA,	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,
			FΙ,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,
			KG,	KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,
			ME,	MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NΙ,	NO,	NZ,	OM,	PG,	PH,
			PL,	PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	ST,	SV,	SY,	TJ,
			TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW		
		RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HR,	HU,
			ΙE,	IS,	ΙΤ,	LT,	LU,	LV,	MC,	MT,	NL,	NO,	PL,	PT,	RO,	SE,	SI,	SK,
			TR,	BF,	ΒJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,
			ΤG,	BW,	GH,	GM,	KE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,
								MD,										
	US	2009	0181	934		A1												
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treatment of an inflammatory or obstructive airways disease.

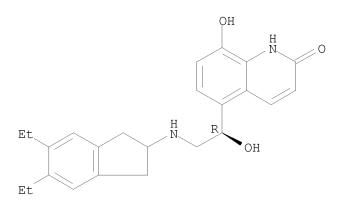
IT 312753-06-3, Indacaterol

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (organic compds. for treatment of inflammatory or obstructive airways disease)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 8 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 150:413828 CA

TITLE: Efficacy and Safety of Indacaterol, a New 24-hour

 $\beta$  2-Agonist, in Patients with Asthma: A

Dose-Ranging Study

AUTHOR(S): Kanniess, Frank; Boulet, Louis-Philippe; Pierzchala,

Wladyslaw; Cameron, Ray; Owen, Roger; Higgins, Mark

CORPORATE SOURCE: Pulmonary Research Institute, Hospital Grosshansdorf,

Grosshansdorf, Germany

SOURCE: Journal of Asthma (2008), 45(10), 887-892

CODEN: JOUADU; ISSN: 0277-0903

PUBLISHER: Informa Healthcare

DOCUMENT TYPE: Journal LANGUAGE: English

AB Background: Indacaterol is a new once-daily inhaled  $\beta$ 2-agonist in clin. development for asthma as a component of a fixed-dose combination with an inhaled corticosteroid. Objectives: To investigate the efficacy and safety of indacaterol in patients with chronic persistent asthma. Methods: A total of 115 patients were randomized in a double-blind, incomplete-block cross-over design to sequences of four 7-day treatment periods (separated by 7-day washouts) with indacaterol 100, 200, 300, 400, or 600  $\boldsymbol{\mu}$  g or placebo, once daily, via single-dose dry-powder inhaler. After the fourth washout, patients received 1 day of open-label formoterol  $12~\mu$  g twice daily. Forced expiratory volume in 1 s (FEV1) was measured for 24 h post-dose on days 1 and 7. Results: For standardized (with respect to time) FEV1 area under the curve at 22 to 24 h (AUC22-24h) on day 1, indacaterol doses  $\geq 200~\mu$  g were superior to placebo (p < 0.05) and similar or greater than formoterol 12  $\mu g$  twice daily. By day 7, mean differences from placebo in FEV1 standardized AUC22-24h were 0.08, 0.16, 0.15, 0.11, and 0.16 L for indacaterol 100, 200, 300, 400, and 600

 $\mu g,$  resp. (all p < 0.05 vs. placebo). Mean FEV1 for indacaterol doses  $\geq$  200  $\mu g$  on day 7 was higher than placebo (p < 0.05) pre-dose and at all post-dose time points. AEs were generally mild in severity; no serious AEs occurred. No clin. meaningful differences were observed between treatments in any safety assessments. Conclusions: Once-daily indacaterol demonstrated sustained 24-h bronchodilator efficacy, with similar efficacy on days 1 and 7, and was generally well tolerated.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(once daily 24-h  $\beta$ 2-agonist indacaterol was well tolerated and showed sustained bronchodilator efficacy in treatment of patient with mild, moderate or severe persistent asthma)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

## Absolute stereochemistry.

12

ANSWER 9 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 150:406769 CA

TITLE: Metered dose dispenser for inhalant formulations

THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

INVENTOR(S): Child, Andrew D.; Helm, Stephen D.
PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA

SOURCE: PCT Int. Appl., 29pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

REFERENCE COUNT:

PAT	PATENT NO.				KIN	D	DATE			APPL	ICAT	ION :	NO.		D	ATE	
WO	2009		A1		2009	0409		WO 2	 008-	 US78	406		2	0081	001		
	W:	ΑE,	AG,	AL,	AM,	AO,	ΑT,	ΑU,	AZ,	BA,	BB,	BG,	BH,	BR,	BW,	BY,	BZ,
		CA,	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,
		FΙ,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KΕ,
		KG,	KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,
		ME,	MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,

PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK,

TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,

AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: GB 2007-19257 A 20071004

AB The invention relates to a metered dose inhaler containing a formulation of medicament, for example, a drug for treatment of respiratory disorder, HFA 134a and/or HFA227, and being substantially free of ethanol and surfactant, with a metering valve comprising a helical spring, a seal, a seal support and a sliding valve stem, wherein the valve is configured and arranged such that a region of compressive contact is defined where a surface applying force to the seal is substantially flat and extends in an arc through an angle in the range from about 180 to 360°. Thus, an aerosol canister was cold-filled with a suspension containing 1.97 mg/mL micronized albuterol sulfate in HFA 134a, and the a metering valve was crimped in place. The inhaler showed a significant and effective reduction in the decrease of return force over the lifetime of the inhaler.

IT 312753-06-3, Indacaterol

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (metered dose inhaler with metering valve and inhalant composition free of ethanol and surfactant)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 150:297293 CA

CCESSION NUMBER: 130:29/293 CF

TITLE: New approaches to managing asthma: a US perspective

AUTHOR(S): Berger, William E.

CORPORATE SOURCE: Allergy and Asthma Associates of Southern California,

Mission Viejo, CA, USA

SOURCE: Therapeutics and Clinical Risk Management (2008),

4(2), 363-379

CODEN: TCRMA6; ISSN: 1176-6336

PUBLISHER: Dove Medical Press (NZ) Ltd.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

A review. Despite remarkable advances in diagnosis and long-term AB management, asthma remains a serious public health concern. Newly updated expert quidelines emphasize the intra- and inter-individual variability of asthma and highlight the importance of periodic assessment of asthma control. These quidelines update recommendations for step-wise asthma treatment, address the burgeoning field of asthma diagnostics, and stress the importance of a patient and health care professional partnership, including written action plans and self monitoring. The field of asthma therapeutics is expanding rapidly, with promising new treatment options available or in development that may address some of the existing barriers to successful asthma management. These approaches simplify treatment, use combinations of agents in one delivery device that have complementary actions, or target specific pathways involved in asthma pathophysiol. Considerable activity is taking place in asthma pharmacogenetics. This review provides an overview of these new approaches to managing asthma, including their present status and future potential.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Asmanex in combination with indacaterol may be effective in treatment of patient with asthma)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 121 THERE ARE 121 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L8 ANSWER 11 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 150:15638 CA

TITLE: A cell-based assay to assess the persistence of action

of agonists acting at recombinant human  $\beta$ 2

adrenoceptors

AUTHOR(S): Summerhill, Susan; Stroud, Timothy; Nagendra, Roshini;

Perros-Huguet, Christelle; Trevethick, Michael

CORPORATE SOURCE: Pfizer Global Research and Development, Allergy and

Respiratory Biology, Sandwich, Kent, CT13 9NJ, UK SOURCE:

Journal of Pharmacological and Toxicological Methods

(2008), 58(3), 189-197

CODEN: JPTMEZ; ISSN: 1056-8719

PUBLISHER: Elsevier DOCUMENT TYPE: Journal LANGUAGE: English

Introduction: The aim was to establish a robust, 96-well, cell-based assay to assess the potency and persistence of action of agonists acting at human recombinant  $\beta$ 2 adrenoceptors expressed in CHO (Chinese Hamster Ovary) cells and to compare this with published duration of action data in guinea pig isolated trachea and human bronchus. Methods: Cells were treated with either: (i)  $\beta$ -adrenoceptor agonist for 30 min, washed and cyclicAMP (cAMP) measured 30 min later-termed washed' cells or, (ii) treated with solvent for 30 min, washed, and then treated with  $\beta$ -adrenoceptor agonist for 30 min and cAMP measured-termed unwashed' cells. The washed' EC50 was divided by the unwashed' EC50 to determine a rightward shift concentration ratio, which was indicative of the persistence of action at the receptor. Results: At the  $\beta$ 2 adrenoceptor salmeterol, carmoterol and indacaterol were resistant to washing with a concentration ratio of < 5, indicating a long persistence of action, whereas formoterol, isoprenaline and salbutamol were washed out with a ratio of 32, > 294 and > 800 resp., suggesting a shorter persistence of action. At  $\beta 1$  and  $\beta$ 3 adrenoceptors all compds. washed out. The persistent effects of salmeterol at  $\beta$ 2 following washing could be reversed by the selective  $\beta$ 2 antagonist ICI 118551, suggesting continued receptor activation. Discussion: The data presented agree well with published data assessing duration of action of  $\beta$ 2 agonists in human isolated bronchus and quinea pig isolated trachea. Key features are: (a) it is a 96-well format which can be used to assess many compds. in a single experiment, (b) both potency and persistence of agonist action are assessed in the same assay, (c) any effects of concentration on the persistence of action can be highlighted,

and (d) it allows triage of compds. prior to tissue bath studies thus reducing the use of animal tissue.

312753-06-3, Indacaterol

RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cell-based assay to assess action persistence  $\beta 2$  adrenoceptor agonists)

RN 312753-06-3 CA

2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-CN yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 12 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 150:106 CA

TITLE: Novel long-acting bronchodilators for COPD and asthma

AUTHOR(S): Cazzola, M.; Matera, M. G.

CORPORATE SOURCE: Unit of Respiratory Diseases, Department of Internal

Medicine, University of Rome 'Tor Vergata', Rome,

Italy

SOURCE: British Journal of Pharmacology (2008), 155(3),

291-299

CODEN: BJPCBM; ISSN: 0007-1188

PUBLISHER: Nature Publishing Group DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

A review. An important step in simplifying asthma and chronic obstructive pulmonary disease (COPD) management and improving adherence with prescribed therapy is to reduce the dose frequency to the min. necessary to maintain disease control. Therefore, the incorporation of once-daily dose administration is an important strategy to improve adherence and is a regimen preferred by most patients, which may also lead to enhancement of compliance, and may have advantages leading to improved overall clin. outcomes. Once-daily  $\beta$ 2-agonists or ultra long-acting β2-agonists (LABAs) such as carmoterol, indacaterol, GSK-159797, GSK-597901, GSK-159802, GSK-642444 and GSK-678007 are under development for the treatment of asthma and COPD. Also some new long-acting antimuscarinic agents (LAMAs) such as aclidinium, LAS-35201, GSK656398, GSK233705, NVA-237 (glycopyrrolate) and OrM3 are under development. In any case, the current opinion is that it will be advantageous to develop inhalers containing combinations of several classes of long-acting bronchodilator drugs in an attempt to simplify treatment regimens as much as possible. Consequently, several options for once-daily dual-action ultra LABA+LAMA combination products are currently being evaluated. A different approach is to have a dimer mol. in which both pharmacologies are present (these mols. are known as M3 antagonist- $\beta$ 2 agonist (MABA) bronchodilators). The advent of a successful MABA product will revolutionize the field and open the door for a new range of combination products.

IT 312753-06-3, Indacaterol RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU

(Therapeutic use); BIOL (Biological study); USES (Uses) (novel long-acting bronchodilators for COPD and asthma)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 13 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 149:569955 CA

TITLE: A method for rapidly predicting drug tissue

distribution using surfactant vesicle electrokinetic

chromatography

AUTHOR(S): Jiang, Zhengjin; Reilly, John; Everatt, Brian

CORPORATE SOURCE: Global Discovery Chemistry, Novartis Institutes for

Biomedical Research, Horsham, UK

SOURCE: Electrophoresis (2008), 29(17), 3674-3684

CODEN: ELCTDN; ISSN: 0173-0835

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal LANGUAGE: English

AΒ Lung tissue distribution of an inhaled drug is important for its potency in the airways and with min. systemic effects within its dose range. As the lung has the smallest diffusion distance of all the organs in the body and negligible diffusion delays, the characteristics of drug distribution in the lung will mainly depend on drug binding to both tissue and plasma protein. This research aims to develop and evaluate surfactant vesicle electrokinetic chromatog. (SEKC) methods for high throughput profile prediction of tissue distribution for inhaled drugs. Several electrokinetic chromatog. methods reported in the literature, as well as immobilized artificial membrane chromatog., were compared and evaluated in respect to chromatog, characteristics and statistical correlations. Among these methods, the docusate sodium salt (AOT) SEKC system showed good reproducibility, short run time, and the highest selectivity for alkylphenone test compds. It also showed a significant statistical correlation between the retention of inhaled drugs and their in vivo volume of distribution at steady-state (Vss) in whole human body neglecting the plasma protein-binding differences. Stronger correlations were observed between the AOT SEKC retention of a series of basic drugs and their rat

lung tissue-to-plasma water partitioning coefficient (Kpu), which is affected only by drug binding to the tissue constituent. Further, on comparing correlations between AOT SEKC retention and Kpu at various rat tissues, it was observed that the strongest correlation was with lung tissue distribution, while the weakest was with brain tissue distribution.

IT 312753-06-3, Indacaterol

RL: ANT (Analyte); PKT (Pharmacokinetics); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(method for rapidly predicting drug tissue distribution using surfactant vesicle electrokinetic chromatog.)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 14 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 149:519049 CA

TITLE: Drug combination comprising  $\beta 2$  agonist and

progestin for treatment of muscle loss

INVENTOR(S): Gilbert, Julian Clive; Gristwood, Robert William

PATENT ASSIGNEE(S): Acacia Pharma Limited, UK

SOURCE: PCT Int. Appl., 11pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT N	PATENT NO.				)	DATE		Ž	APPL	ICAT	ION I	NO.		D	ATE	
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WO 20081	L2930	8 (		A2		2008	1030	Ī	WO 2	008-0	GB14	52		2	0080	424
W:	W: AE, AG, A CA, CH, C				ΑO,	ΑT,	ΑU,	ΑZ,	ΒA,	BB,	BG,	BH,	BR,	BW,	BY,	BZ,
	CA,	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,
	FI,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,
	KG,	KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,
	ME,	MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,
	ME, MG, MI PL, PT, RO			RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ТJ,	TM,

TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,

TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: GB 2007-7930 A 20070424

GB 2007-7931 A 20070424 GB 2007-10101 A 20070525

AB The present invention is a product comprising a  $\beta 2$  agonist and a progestin, as a combined preparation for sep., simultaneous or sequential use in the treatment or prevention of muscle loss. The present invention is also a  $\beta 2$  agonist selected from R,R-formoterol, indacaterol or ritodrine, for use in the treatment or prevention of muscle loss.

IT 312753-06-3, Indacaterol

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (drug combination comprising  $\beta 2$  agonist and progestin for treatment of muscle loss)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 15 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 149:439380 CA

TITLE: Selective structure-based virtual screening for full

and partial agonists of the  $\beta 2$  adrenergic

receptor. [Erratum to document cited in CA149:298766]

AUTHOR(S): de Graaf, Chris; Rognan, Didier

CORPORATE SOURCE: Bioinformatics of the Drug, Institut Gilbert Laustriat

CNRS UMR 7175-LC1, Universite Louis Pasteur

Strasbourg, Illkirch, 67401, Fr.

SOURCE: Journal of Medicinal Chemistry (2008), 51(20), 6620

CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal LANGUAGE: English

AB On page 4979, Figure 2 was incorrectly given; the correct figure is given.

IT 312753-06-3, Indacaterol

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);

PRP (Properties); BIOL (Biological study)

(selective structure-based virtual screening for full and partial agonists of  $\beta 2$  adrenergic receptor (Erratum))

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 16 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 149:315569 CA

TITLE: Therapeutic release agents, esters of alkylcarbamic

acids, as inhibitors of fatty acid amide hydrolase

activity

INVENTOR(S): Dasse, Olivier; Parrott, Jeff A.; Putman, David; Adam,

Julia

PATENT ASSIGNEE(S): N.V. Organon, Neth.

SOURCE: PCT Int. Appl., 250pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PAT	ATENT NO.					D	DATE			APPL	ICAT	ION I	NO.		D	ATE	
· · · <del>-</del>	2008 2008				A2 A3		2008 2008		,	wo 2	008-1	JS53	785		2	080	213
WO	WO 2008100977 W: AE, AG, A CA, CH, C FI, GB, G KG, KM, K ME, MG, M PL, PT, F TN, TR, T RW: AT, BE, E IE, IS, I TR, BF, E		CN, GD, KN, MK, RO, TT, BG, IT,	AM, CO, GE, KP, MN, RS, TZ, CH, LT,	AO, CR, GH, KR, MW, RU, UA, CY, LU, CG,	AT, CU, GM, KZ, MX, SC, UG, CZ, LV,	AU, CZ, GT, LA, MY, SD, US, DE, MC, CM,	DE, HN, LC, MZ, SE, UZ, DK, MT, GA,	DK, HR, LK, NA, SG, VC, EE, NL, GN,	DM, HU, LR, NG, SK, VN, ES, NO, GQ,	DO, ID, LS, NI, SL, ZA, FI, PL, GW,	DZ, IL, LT, NO, SM, ZM, FR, PT,	EC, IN, LU, NZ, SV, ZW GB, RO, MR,	EE, IS, LY, OM, SY, GR, SE, NE,	EG, JP, MA, PG, TJ, HR, SI, SN,	ES, KE, MD, PH, TM, HU, SK, TD,	
PRIORITY	TR, BF, B TG, BW, G AM, AZ, B ORITY APPLN. INFO.:					•	•	•	TJ,	•	AP,	EA,	EP,	OA	•	и, 2070:	·

US 2007-948082P P 20070705

OTHER SOURCE(S): MARPAT 149:315569

AB Pharmacol. inhibition of fatty acid amide hydrolase (FAAH) activity leads to increased levels of fatty acid amides. Esters of alkylcarbamic acids are disclosed that are inhibitors of FAAH activity. Compds. disclosed herein inhibit FAAH activity. Described herein are processes for the preparation of esters of alkylcarbamic acid compds., compns. that include them, and methods of use thereof. Thus, to prepare a parenteral pharmaceutical composition for injection, 100 mg of a water-soluble salt of a compound of the invention was dissolved in DMSO and mixed with 10 mL of 0.9% sterile saline; the mixture was incorporated into dosage form unit suitable for administration by injection.

IT 312753-06-3D, Indacaterol, derivs.

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(therapeutic release agents, esters of alkylcarbamic acids, as inhibitors of fatty acid amide hydrolase activity)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 17 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 149:307691 CA

TITLE: Novel combination of spiroheterocyclicpiperidines to

be used in the treatment of airway diseases, especially chronic obstructive pulmonary disease

(copd) and asthma

INVENTOR(S): Eriksson, Tomas; Hansson, Johan; Mensonides-Harsema,

Marguerite; Mo, John AstraZeneca AB, Swed.

PATENT ASSIGNEE(S): AstraZeneca AB, Swed. SOURCE: PCT Int. Appl., 56pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

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20080828
                                           WO 2008-SE50204
     WO 2008103126
                                                                   20080221
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             KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
             ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
             PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM,
             TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
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             TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
             TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:
                                            US 2007-891244P
                                                              P 20070223
                        MARPAT 149:307691
OTHER SOURCE(S):
GT
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\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

The present invention provides a pharmaceutical product comprising, in AB combination of, (a) a (therapeutically effective) dose of a first active ingredient, which is a compound of formula I [m = 0-2; n = 0-2; q = 0 or 1;p = 0-2; R1 = halo, CN, haloalkyl; R2 = (=0) or alkyl; R3 = H, OH, or NH2; R4 = H, OH, oxo, etc.; R5 = H, halo, OH, (un)substituted alkoxy; A = bond or alkyl; R8 = H or alkyl; R9 = halo, CN, alkoxy, or haloalkyl; X, Y and Z independently = bond, O, NH, CH2 or C(O), provided that only one of X, Y and  $\overline{Z}$  is a bond, and provided that X and Y are not simultaneously O or C(0)] or a pharmaceutically acceptable salt thereof; and (b) a (therapeutically effective) dose of a second active ingredient, which is a glucocorticoid receptor agonist; and optionally, (c) a (therapeutically effective) dose of a third active ingredient, which is a  $\beta$ 2-agonist. The invention further relates to pharmaceutical compns. comprising said combination and to methods of treating treatment of airway diseases, especially chronic obstructive pulmonary disease (COPD) and asthma in mammals by administrating said combination. Select I are prepared, e.g., II·TFA was prepared via Wittig reaction of 4-fluoro-2-hydroxybenzaldehyde with Me (triphenylphosphoranylidene)acetate followed by hydrogenation, reaction with (2S)-oxiran-2-ylmethyl 3-nitrobenzenesulfonate, and hydrolysis and workup with TFA. Bioassays are described (no data). The invention further relates to a kit comprising the combination and use of said kit in treatment of airway diseases such as COPD and asthma. 312753-06-3, Indacaterol ΙT

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(claimed co-drug; novel combination of spiroheterocyclicpiperidines to be used in the treatment of airway diseases, especially chronic obstructive pulmonary disease and asthma)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 18 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 149:298766 CA

TITLE: Selective Structure-Based Virtual Screening for Full

and Partial Agonists of the  $\beta$ 2 Adrenergic

Receptor

AUTHOR(S): de Graaf, Chris; Rognan, Didier

CORPORATE SOURCE: Bioinformatics of the Drug, Institut Gilbert Laustriat

CNRS UMR 7175-LC1, Universite Louis Pasteur

Strasbourg, Illkirch, 67401, Fr.

SOURCE: Journal of Medicinal Chemistry (2008), 51(16),

4978-4985

CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal LANGUAGE: English

AB The recently solved high-resolution X-ray structure of the  $\beta 2$  adrenergic receptor has been challenged for its ability to discriminate inverse agonists/antagonists from partial/full agonists. Whereas the X-ray structure of the ground state receptor was unsuitable to distinguish true ligands with different functional effects, modifying this structure to reflect early conformational events in receptor activation led to a receptor model able to selectively retrieve full and partial agonists by structure-based virtual screening. The use of a topol. scoring function based on mol. interaction fingerprints was shown to be mandatory to properly rank docking poses and achieve acceptable enrichments for partial and full agonists only.

IT 312753-06-3, Indacaterol

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)

(selective structure-based virtual screening for full and partial agonists of  $\beta 2$  adrenergic receptor)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 95 THERE ARE 95 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 19 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 149:293749 CA

TITLE: Pharmaceutical combinations of bronchodilators and

corticosteroids for treatment of airway diseases

INVENTOR(S): Lulla, Amar; Malhotra, Geena

PATENT ASSIGNEE(S): Cipla Limited, India; Curtis, Philip Anthony

SOURCE: PCT Int. Appl., 43pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

I	PATENT NO.					D	DATE		•	APPL	ICAT	ION :	NO.		D.	ATE	
	 WO 200 WO 200	81021	28				2008			WO 2	008-	 GB57	8		2	0800	219
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		CA,	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,
		FI,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,
		KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,		
		MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	ΝI,	NO,	NΖ,	OM,	PG,	PH,		
		RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ТJ,	TM,		
		TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW					
	RW	: AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HR,	HU,
		ΙE,	IS,	ΙΤ,	LT,	LU,	LV,	MC,	MΤ,	ΝL,	NO,	PL,	PT,	RO,	SE,	SI,	SK,
		TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,
		•	•	•	•		•	•	•	•	•	•	•	•	UG,	ZM,	ZW,
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										IN 2	007-	MU16	42	1	A 2	0070	827
										IN 2						0071	
PRIOR	CA, CH, CN, CO, CR, CU, FI, GB, GD, GE, GH, GM, KG, KM, KN, KP, KR, KZ, ME, MG, MK, MN, MW, MX, PL, PT, RO, RS, RU, SC, TN, TR, TT, TZ, UA, UG, RW: AT, BE, BG, CH, CY, CZ, IE, IS, IT, LT, LU, LV, TR, BF, BJ, CF, CG, CI, TG, BW, GH, GM, KE, LS, AM, AZ, BY, KG, KZ, MD, IN 2007MU00314 A 20081						LA, MY, SD, US, DE, MC, CM, MW,	LC, MZ, SE, UZ, DK, MT, GA, MZ, TJ,	LK, NA, SG, VC, EE, NL, GN, NA, TM, IN 2 IN 2 IN 2 IN 2	LR, NG, SK, VN, ES, NO, GQ, SD, AP, 007-1007-1007-1007-1007-1007-1007-1007-	LS, NI, SL, ZA, FI, GW, SL, EA, MU31 MU31 MU16 MU21	LT, NO, SM, ZM, FR, PT, ML, SZ, EP, 4 4 4 42	LU, NZ, SV, ZW GB, RO, MR, TZ, OA	LY, OM, SY, GR, SE, NE, UG, 2 A 2 A 2 A 2	MA, PG, TJ, HR, SI, SN, ZM, 0070, 0070, 0070,	1 H S S S S S S S S S S S S S S S S S S	

AB A pharmaceutical combination comprising (a) a combination of two or more bronchodilators; or (b) a combination of at least one bronchodilator in combination with at least one corticosteroid for simultaneous or sequential administration. A combination is used in the prevention or treatment of respiratory, inflammatory or obstructive airway diseases.

Thus, an aerosol formulation was prepared comprising ciclesonide 16 mg, formoterol 0.96 mg, ethanol 224 mg, lecithin 0.0034 mg, and propellant HFA227 11.0 g.

312753-06-3, Indacaterol ΙT

> RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(inhalant compns. comprising combinations of bronchodilators and corticosteroids for treatment of airway diseases)

312753-06-3 CA RN

2(1H) -Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-CN yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 20 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 149:259111 CA

TITLE: Bronchodilator efficacy of indacaterol, a novel

once-daily  $\beta$ 2-agonist, in patients with

persistent asthma

AUTHOR(S): Pearlman, David S.; Greos, Leon; LaForce, Craig;

> Orevillo, Chadwick J.; Owen, Roger; Higgins, Mark Colorado Allergy and Asthma Centers, Denver, CO, USA

CORPORATE SOURCE: SOURCE:

Annals of Allergy, Asthma, & Immunology (2008),

101(1), 90-95

CODEN: ALAIF6; ISSN: 1081-1206

PUBLISHER: American College of Allergy, Asthma, & Immunology

DOCUMENT TYPE: Journal LANGUAGE: English

Indacaterol is a novel once-daily inhaled  $\beta$ 2-agonist in development AB for the treatment of patients with asthma or chronic obstructive pulmonary disease. To investigate the bronchodilator efficacy of indacaterol in patients with persistent asthma. Patients received a randomized sequence of single doses of indacaterol, 400 µg, via single-dose dry powder inhaler (SDDPI); indacaterol, 200  $\mu g\text{,}$  via multidose dry powder inhaler (MDDPI); and placebo. At each visit, the forced expiratory volume in 1  $\ensuremath{\text{s}}$ (FEV1) was recorded at a series of time points during a 24-h period. Of 33 patients screened, 25 were randomized to treatment. Adjusted mean FEV1 was significantly higher (P  $\leq$  .005) for both indacaterol doses vs placebo at most time points. The first time points at which statistically significant treatment differences were observed for indacaterol and placebo in FEV1 were 0.17 L at 5 min after dosing for 400  $\mu g$  of indacaterol

(SDDPI) and 0.21 L at 10 min for 200  $\mu g$  of indacaterol (MDDPI) (both P < .001 vs placebo). Differences relative to placebo at the final time point, 24 h after dosing, were 0.29 L and 0.15 L for indacaterol, 400  $\mu g$  and 200  $\mu g$ , resp. (both P  $\leq$  .003 vs placebo). Overall, FEV1 was significantly higher for the 400- $\mu g$  dose compared with the 200- $\mu g$  dose from 15 min to 2 h after dosing (P  $\leq$  .013) and from 5 h onward (P  $\leq$  .022). Indacaterol was associated with good tolerability and safety. Indacaterol demonstrates sustained bronchodilator efficacy throughout the full 24-h period, with a rapid onset of action and a good overall safety profile.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(indacaterol  $\beta 2$ -agonist at  $400\mu g$  via single-dose dry powder inhaler showed sustained bronchodilator efficacy and safety in patient with persistent asthma)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 21 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 149:119641 CA

TITLE: Combination therapy for the treatment of airways

disease

PATENT ASSIGNEE(S): Novartis AG, Switz. SOURCE: Eur. Pat. Appl., 20pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

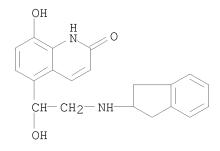
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

EP 1938822 A1 20080702 EP 2006-126840 20061221

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,

BA, HR, MK, RS A1 20080626 WO 2007-EP64288 WO 2008074856 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM PRIORITY APPLN. INFO.: EP 2006-126840 A 20061221 A medicament that comprises, sep. or together (A) a quinolinone compound described herein; and (B) an antibacterial agent; for simultaneous, sequential or sep. administration in the treatment of an inflammatory, infective or obstructive airways disease. ΙT 312753-16-5 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (combination therapy for treatment of airways disease) RN 312753-16-5 CA 2(1H) - Quinolinone, 5 - [2 - [(2, 3 - dihydro - 1H - inden - 2 - y1) amino] - 1 - hydroxyethyl] -CN 8-hydroxy- (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 22 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 149:96028 CA

TITLE: Combination therapy for the treatment of airways

disease

INVENTOR(S): Higgins, Mark Nicholas PATENT ASSIGNEE(S): Novartis AG, Switz. SOURCE: PCT Int. Appl., 28pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent

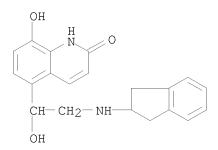
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

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20080626
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     WO 2008074856
                                                                   20071220
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             KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
             MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
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             TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
             GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
             BY, KG, KZ, MD, RU, TJ, TM
                                           EP 2006-126840
     EP 1938822
                         A1 20080702
        R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,
             BA, HR, MK, RS
PRIORITY APPLN. INFO.:
                                            EP 2006-126840
                                                                A 20061221
OTHER SOURCE(S):
                         MARPAT 149:96028
     A medicament that comprises, sep. or together (A) a quinolinone compound
     described here; and (B) an antibacterial agent; for simultaneous,
     sequential or sep. administration in the treatment of an inflammatory,
     infective or obstructive airways disease.
     312753-16-5
ΙT
     RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (combination therapy for treatment of airways disease)
     312753-16-5 CA
RN
CN
     2(1H)-Quinolinone, 5-[2-[(2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-
     8-hydroxy- (CA INDEX NAME)
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REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 23 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 149:62726 CA

TITLE: Processes for taste-masking of inhaled formulations INVENTOR(S): Schuster, Jeffrey A.; Cipolla, David C.; Farr, Stephen

PATENT ASSIGNEE(S): Aradigm Corporation, USA SOURCE: U.S. Pat. Appl. Publ., 9pp.

CODEN: USXXCO DOCUMENT TYPE: Patent

LANGUAGE: Facence English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080138397 PRIORITY APPLN. INFO.:	A1	20080612	US 2007-876407 US 2006-862751P	20071022 20061024

The present invention provides novel processes and methodologies to AB minimize the bitter or otherwise unpleasant taste, to minimize the tendency to stimulate the cough reflex, or to minimize oropharyngeal deposition of active compds. administered by the pulmonary/inhalation route and to deliver hydroxychloroquine (HCQ) either singularly or in combination with an antimalarial and aminoquinolone by the pulmonary/inhalation route in a sustained release or other formulation. The formulation minimizes the bitter or otherwise unpleasant taste of HCQ or any potential to stimulate the cough reflex, and to deliver a dopaminergic compound or its prodrug, including ABT-431 by the pulmonary/inhalation route in a sustained release or other formulation. The formulation also delivers an antibiotic, including duramycin by the pulmonary/inhalation route in a sustained release that minimizes the unpleasant taste of the drug or any potential to stimulate throat irritation.

IT 312753-06-3

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (processes for taste-masking of inhaled formulations)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 24 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 148:417677 CA

TITLE: Indacaterol provides sustained 24 h bronchodilation on

once-daily dosing in asthma: a 7-day dose-ranging

study

AUTHOR(S): LaForce, C.; Alexander, M.; Deckelmann, R.; Fabbri, L.

M.; Aisanov, Z.; Cameron, R.; Owen, R.; Higgins, M.

CORPORATE SOURCE: Department of Pediatrics, University of North Carolina

Clinical Research, Raleigh, NC, USA

SOURCE: Allergy (Oxford, United Kingdom) (2008), 63(1),

103-111

CODEN: LLRGDY; ISSN: 0105-4538

PUBLISHER: Blackwell Publishing Ltd.

DOCUMENT TYPE: Journal LANGUAGE: English

Background: Indacaterol is a novel, once-daily  $\beta$ 2-agonist in AB development for the treatment of asthma and chronic obstructive pulmonary disease. Studies were required to determine optimal dose(s) for continuing investigation. Objective: A dose-ranging study was undertaken to evaluate efficacy and safety of indacaterol. Methods: A total of 436 patients with persistent asthma receiving inhaled corticosteroids were randomized to 7 days treatment with once-daily indacaterol 50, 100, 200, or 400  $\mu g$  via multi-dose dry-powder inhaler (MDDP1; Certihaler), indacaterol  $400~\mu g$ via single-dose dry-powder inhaler (SDDPI), or placebo. Serial 24-h spirometry was performed on days 1 and 7. Vital signs, laboratory evaluations, and adverse events were monitored. Results: All doses of indacaterol increased the mean time-standardized area under the curve of forced expiratory volume in 1 s (FEV1) from 22 to 24 h postdose (P < 0.001 vs placebo) on days 1 and 7, with clin. relevant treatment-placebo differences of 240, 260, 350, 300, and 380 mL on day 1 and 230, 220, 320, 250, and 270 mL on day 7 for indacaterol 50, 100, 200, and 400  $\mu g$  via MDDPI and 400  $\mu g$  via SDDPI, resp. All doses increased mean FEV1 (P < 0.05 vs placebo) from 5 min to 24 h postdose on days 1 and 7. All doses were well tolerated. Most adverse events were mild-to-moderate in seventy: most frequently reported were respiratory, thoracic, and mediastinal disorders. Conclusion: Once-daily dosing with indacaterol provided sustained 24-h bronchodilation in patients with moderate-to-severe asthma, with a satisfactory overall safety profile. Indacaterol 200  $\mu$ g appears the optimum dose, offering the best efficacy/safety balance.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(once-daily indacaterol dose via Certihaler and single-dose dry-powder inhaler was safe, tolerable and provided sustained 24-h bronchodilation in patient with moderate-to-severe asthma)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT:

27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 25 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 148:346682 CA

TITLE: Efficacy and safety of single therapeutic and

supratherapeutic doses of indacaterol versus

author(S): salmeterol and salbutamol in patients with asthma Brookman, Laurence J.; Knowles, Lisa J.; Barbier,

Michaela; Elharrar, Brigitte; Fuhr, Rainard; Pascoe,

Steve

CORPORATE SOURCE: Novartis Horsham Research Centre, Horsham, UK

SOURCE: Current Medical Research and Opinion (2007), 23(12),

3113-3122

CODEN: CMROCX; ISSN: 0300-7995

PUBLISHER: Informa Healthcare

DOCUMENT TYPE: Journal LANGUAGE: English

Objective: This study compared the bronchodilator efficacy and safety of AΒ indacaterol with placebo, salbutamol and salmeterol, in patients with persistent asthma, at single therapeutic and supratherapeutic doses. Research design and methods: This was a randomized, open-label crossover study in adult subjects with asthma (forced expiratory volume in 1 s [FEV1]  $\geq$  60% predicted). In part A, patients (n = 20) received single doses of indacaterol 200  $\mu g$ , salbutamol 200  $\mu g$ , salmeterol 50  $\mu g$ and placebo. In part B, patients (n = 19) received single doses of indacaterol 1000  $\mu g$ , salbutamol 1000  $\mu g$ , salmeterol 250  $\mu g$  and placebo. Main outcomes measures; Results: For the primary endpoint, FEV1 area under the effect curve during 0-24 h, indacaterol 200  $\mu g$  was statistically superior to placebo and salbutamol. Indacaterol 200  $\mu g$ FEV1 was higher than placebo (5 min to 24 h), salbutamol 200  $\mu g$  (4-24 h), and salmeterol 50  $\mu q$  (5 and 15 min and 22 and 24 h). Few adverse events were reported; all were mild or moderate in severity. Initial changes were observed in glucose, potassium, heart rate and QTc interval, but all values remained within normal ranges. Values matched placebo levels after a shorter time for indacaterol 1000  $\mu g$  than for salmeterol 250 μg. Conclusions: In this single-dose, open-label study, indacaterol 200 µg provided effective 24-h bronchodilation, with a longer duration than salmeterol 50  $\mu q$  and a good overall safety profile. The sustained bronchodilation of indacaterol  $1000~\mu g$  was not associated with sustained systemic adverse effects.

IT 312753-06-3, Indacaterol

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(single therapeutic or supratherapeutic doses of indacaterol showed effective 24-h bronchodilation with longer duration and overall safety profile compared to salmeterol and salbutamol in adult with persistent asthma)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 26 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 148:315167 CA

TITLE: Polymorphic crystal form of a

indan-2-ylamino-hydroxyethyl-quinolinone maleate

derivative as beta-adrenoceptor agonist

INVENTOR(S): Lohse, Olivier; Monnier, Stephanie; Jordine, Guido

PATENT ASSIGNEE(S): Novartis AG, Switz. SOURCE: PCT Int. Appl., 25pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA:	FENT			KIN	D _	DATE			APPL	ICAT	ION 1	NO.		D.	ATE		
WO	2008	0258	16		A1		2008	0306		WO 2	007-	EP59	039		2	0070	830
	W:						ΑU,									BZ,	CA,
		CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,	FI,
		GB,	GD,	GE,	GH,	GM,	GΤ,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,
		KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,	${ m ME}$ ,
		MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NΙ,	NO,	NΖ,	OM,	PG,	PH,	PL,
		PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ΤJ,	TM,	TN,
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IN 2009DN00466	A	20090612	IN 2009-DN466		20090120
NO 2009001234	A	20090330	NO 2009-1234		20090324
KR 2009049615	A	20090518	KR 2009-706531		20090330
PRIORITY APPLN. INFO.:			EP 2006-119895	A	20060831
			WO 2007-EP59039	W	20070830

GΙ

HO HO Me 
$$C = O$$
OH OH

AB New polymorphic crystal form of (R)-5-[2-(5,6-diethyl-indan-2-ylamino)-l-hydroxyethyl]-8- hydroxy-lH -quinolin-2-one maleate (I) designated crystal form Qalpha that is useful in the treatment of inflammatory or obstructive airways diseases are claimed. A method for preparing crystal form Qalpha is also described. Thus, 50 mg (R)-5-[2-(5,6-diethyl-indan-2-ylamino)-l-hydroxyethyl]-8-hydroxy-lH-quinolin-2-one maleate was equilibrated in 1 mixture of 90% ethanol, 5% water, and 5% isopropanol over 3 days at 25 °C. The product was then filtered and dried for 10 min in the air to obtain white crystals.

Ι

IT 753498-25-8P

RL: PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (polymorphic crystal form of indan-2-ylamino-hydroxyethyl-quinolinone maleate derivative as beta-adrenoceptor agonist)

RN 753498-25-8 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy-, (2Z)-2-butenedioate (1:1) (CA INDEX NAME)

CM 1

CRN 312753-06-3 CMF C24 H28 N2 O3

Absolute stereochemistry.

CM 2

CRN 110-16-7 CMF C4 H4 O4

Double bond geometry as shown.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 27 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 148:299514 CA

TITLE: Tolerability of indacaterol, a novel once-daily

 $\beta$ 2-agonist, in patients with asthma: a

randomized, placebo-controlled, 28-day safety study AUTHOR(S): Yang, Wiliam H.; Martinot, Jean Benoit; Pohunek, Petr;

Beier, Jutta; Magula, Daniel; Cameron, Ray; Owen,

Pogor: Higging Mark

Roger; Higgins, Mark

CORPORATE SOURCE: Allergy and Asthma Research Centre, Ottawa, ON, Can.

SOURCE: Annals of Allergy, Asthma, & Immunology (2007), 99(6),

555-561

CODEN: ALAIF6; ISSN: 1081-1206

PUBLISHER: American College of Allergy, Asthma, & Immunology

DOCUMENT TYPE: Journal LANGUAGE: English

AB Background: Indacaterol is a novel, inhaled, once-daily β2-agonist. Objective: To investigate the safety and tolerability of indacaterol at doses of 400 and 800 μg/d. Methods: Randomized, double-blind, placebo-controlled, parallel-group, multicenter, 28-day study. Patients with persistent asthma (forced expiratory volume in 1 s [FEV1]  $\geq$ 60% predicted,  $\leq$ 1,600 μg of beclomethasone dipropionate or equivalent daily) received indacaterol, 400 μg (n = 59) or 800 μg (n = 59), or placebo (n = 26) once daily via a single-dose dry powder inhaler. Safety assessments were performed before and after dosing on days 1, 14, and 28,

with particular attention to key  $\beta$ 2-agonist safety variables. Results: A total of 144 patients were randomized, with 135 (93.8%) completing the study. Indacaterol was well tolerated: the incidence of adverse events (AEs) was similar between the active and placebo groups, and AEs, when they occurred, were mild or moderate for most (98.2%). There was no dose-response relationship between indacaterol and the incidence of AEs (400  $\mu q$ , 40.7%; 800  $\mu q$ , 37.3%; and placebo, 38.5%). Few AEs considered as  $\beta$ 2-agonist class effects occurred (none leading to withdrawal). Small differences between indacaterol and placebo in mean serum potassium ( $\leq$ -0.29 mmol/L) and glucose ( $\leq$ 0.93 mmol/L) levels were occasionally statistically significant (P < .05) but not regarded as clin. meaningful. As expected for a  $\beta$ 2-agonist, there was some indication of a trend in QTc prolongation with increasing exposure (maximum mean change, 8.9 ms; P < .05 vs placebo). Significant increases in FEV1 (P < .05) were seen at all postbaseline time points for both indacaterol doses vs placebo, with indacaterol-placebo differences 30 min after dosing of 0.21 to 0.25 L and before dosing on days 14 and 28(approx. 24 h after the previous dose) of 0.15 to 0.23 L. Conclusion: Indacaterol had a good overall safety profile and was well tolerated at both doses, with predose FEV1 results on days 14 and 28 indicating 24-h bronchodilator efficacy.

312753-06-3, Indacaterol ΙT

> RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(400 and 800  $\mu g$  indacaterol once-daily was safe, well tolerated and showed bronchodilator activity in patient with persistent asthma)

RN 312753-06-3 CA

CN 2(1H) -Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

CA COPYRIGHT 2009 ACS on STN ANSWER 28 OF 76

ACCESSION NUMBER: 148:175952 CA

Metered dose dispensers for aerosols TITLE:

Jinks, Philip A.; Hodson, Peter D.; Hansen, Paul E. INVENTOR(S):

PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA

SOURCE:

PCT Int. Appl., 93pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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APPLICATION NO.
     WO 2008014161 A1 000
     PATENT NO.
                         KIND DATE
                          A1 20080131 WO 2007-US73764 20070718
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
              CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
              GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,
              KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
              MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
              PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
              TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
              BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
              BY, KG, KZ, MD, RU, TJ, TM
                           A1 20090408
                                              EP 2007-813048
     EP 2043718
                                                                        20070718
         R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR,
              AL, BA, HR, MK, RS
     IN 2009CN00437
                      A
                                  20090605
                                               IN 2009-CN437
                                               GB 2006-14621 A 20060724 WO 2007-US73764 W 20070718
PRIORITY APPLN. INFO.:
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- AB A pressurized metered dose dispenser for dispensing an aerosol formulation comprises particles of a medicament suspended in liquefied propellant, optionally in combination with one or more excipients, the dispenser comprising an aerosol container equipped with a metered dose valve, where a formulation chamber is defined in part by the internal walls of the container, and wherein the dispenser further comprises a porous, fluid permeable, particulate semi-permeable body located within the formulation chamber adjacent to the metered dose valve. A suspension aerosol formulation contains micronized Brilliant Blue food dye, submicron anhydrous lactose, oleic acid, dehydrated ethanol, and HFA 134a.
- RN 312753-06-3 CA
- CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 29 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 148:159629 CA

TITLE: Pharmacological characterization of indacaterol, a

novel once daily inhaled  $\beta 2$  adrenoceptor agonist, on small airways in human and rat precision-cut lung

slices

AUTHOR(S): Sturton, Richard G.; Trifilieff, Alexandre; Nicholson,

Andrew G.; Barnes, Peter J.

CORPORATE SOURCE: Thoracic Medicine, National Heart and Lung Institute,

London, UK

SOURCE: Journal of Pharmacology and Experimental Therapeutics

(2008), 324(1), 270-275

CODEN: JPETAB; ISSN: 0022-3565

PUBLISHER: American Society for Pharmacology and Experimental

Therapeutics

DOCUMENT TYPE: Journal LANGUAGE: English

Indacaterol is a novel once daily inhaled  $\beta$ 2 adrenoceptor agonist in AΒ clin. development. This study compared the properties of indacaterol with salmeterol, formoterol, and albuterol on small airways in precision-cut lung slices from human and rat contracted with carbachol and serotonin, resp. In human lung slices, the rank order of potency was formoterol ≥ salmeterol > indacaterol > albuterol, resp. Indacaterol had similar intrinsic efficacy to formoterol, followed by albuterol and salmeterol. The onset of action was fast for albuterol, formoterol, and indacaterol, whereas it was significantly slower for salmeterol. The duration of action ranking was indacaterol > salmeterol > formoterol > albuterol. When compared with human lung slices, in the rat lung slices, similar potency, intrinsic efficacy, and onset of action were observed for indacaterol, formoterol, and salmeterol. Albuterol had an increased potency when compared with human lung slices and a slower onset of action. In conclusion, our results show that the human lung slice system seems to be a good model to study the clin. properties of inhaled long-acting  $\beta$ 2 adrenoceptor agonists and that caution is needed extrapolating from rat model to humans. Finally, using the human lung slice model, we have characterized indacaterol as a fast acting compound with a longer duration of action than salmeterol and formoterol.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(pharmacol. characterization of indacaterol, a novel once daily inhaled  $\beta$ 2 adrenoceptor agonist, on small airways in human and rat precision-cut lung slices)

RN 312753-06-3 CA

2(1H) - Quinolinone, 5 - [(1R) - 2 - [(5,6 - diethyl - 2,3 - dihydro - 1H - inden - 2 -CN yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS REFERENCE COUNT: 21 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 30 OF 76 CA COPYRIGHT 2009 ACS on STN L8

148:128252 CA ACCESSION NUMBER:

TITLE: Compositions of glycopyrronium salt for inhalation INVENTOR(S): Haeberlin, Barbara; Stowasser, Frank; Wirth, Wolfgang;

Baumberger, Anton; Abel, Stephan; Kaerger, Sebastian;

Kieckbusch, Thomas

PATENT ASSIGNEE(S): Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PAT	CENT 1	NO.			KIN	D	DATE		-	APPL	ICAT	ION 1	NO.		D	ATE	
WO	2008	0004	 82		A1	_	2008	0103	;	 WO 2	 007-:	EP57	44		2	0070	 628
	W:	ΑE,	AG,	AL,	ΑM,	ΑT,	ΑU,	ΑZ,	BA,	BB,	BG,	BH,	BR,	BW,	BY,	BZ,	CA,
		CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,	FΙ,
		GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,
		KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,	ME,
		MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	ΝI,	NO,	NZ,	OM,	PG,	PH,	PL,
		PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ΤJ,	TM,	TN,
		TR,	TT,	TZ,	UA,	UG,	US,	UΖ,	VC,	VN,	ZA,	ZM,	ZW				
	RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HU,	ΙE,
		IS,	IT,	LT,	LU,	LV,	MC,	MT,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,
		ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,	ΤG,	BW,
		GH,	GM,	ΚE,	LS,	MW,	ΜZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	ΑZ,

BY, KG, KZ, MD, RU, TJ, TM AU 2007264000 Α1 20080103 AU 2007-264000 20070628 CA 2655381 20080103 CA 2007-2655381 20070628 Α1 EP 2037879 Α1 20090325 EP 2007-764925 20070628 AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, RS IN 2008DN10441 20090320 IN 2008-DN10441 20081217 Α MX 2008016356 20090116 MX 2008-16356 20081218 Α KR 2009023650 20090305 KR 2008-731818 20081229 Α CN 101484134 Α 20090715 CN 2007-80025015 20081230 PRIORITY APPLN. INFO.: GB 2006-13161 A 20060630 WO 2007-EP5744 W 20070628

AB A process for preparing dry powder formulations of a glycopyrronium salt for inhalation that have good stability. The process involves (a) micronizing a glycopyrronium salt together with an anti-adherent agent, and (b) admixing carrier particles to form the dry powder formulation.

IT 312753-06-3, Indacaterol

RL: BSU (Biological study, unclassified); BIOL (Biological study) (compns. of glycopyrronium salt for inhalation)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 31 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 148:128248 CA

TITLE: A pharmaceutical composition comprising an IKK2

inhibitor and a second active ingredient. Andersson, Paul; Boerjesson, Lena; Eriksson,

Christina; Larsson, Joakim

PATENT ASSIGNEE(S): Astrazeneca A/B, Swed. SOURCE: PCT Int. Appl., 57pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

INVENTOR(S):

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PATENT NO.
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                                         APPLICATION NO.
                                                                 DATE
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                        A1 20080103 WO 2007-SE622
    WO 2008002246
                                                                 20070626
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
            CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
            GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,
            KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG,
            MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT,
            RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR,
            TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
        RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
            GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
            BY, KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:
                                          US 2006-816996P
                                                            P 20060628
OTHER SOURCE(S):
                       MARPAT 148:128248
    The present invention provides pharmaceutical compns. comprising an IKK2
    inhibitor and a second active ingredient, and their use in therapy.
ΙΤ
    312753-06-3
    RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (pharmaceutical composition comprising IKK2 inhibitor and second active
       ingredient)
RN
    312753-06-3 CA
CN
    2(1H) -Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-
    yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)
```

Absolute stereochemistry.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 32 OF 76 CA COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 148:106207 CA Quinolinone derivatives in salt or solvate form and their pharmaceutical compositions for treating obstructive airway diseases and inflammation mediated by the  $\beta$ 2-adrenoreceptor INVENTOR(S): Lohse, Olivier; Monnier, Stephanie; Reber, Jean-Louis PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis Pharma GmbH

SOURCE: PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent English LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

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PATENT NO.
                             KIND DATE APPLICATION NO.
      W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
                CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
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                MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
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      EP 1878722
                              A1 20080116
                                                     EP 2006-117129
           R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,
                BA, HR, MK, YU
                              A1 20080103 AU 2007-264946
A1 20080103 CA 2007-2654801
A1 20090408 EP 2007-819899
                              A1
      AU 2007264946
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      CA 2654801
                              A1
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      EP 2044025
                                                                                   20070702
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                AL, BA, HR, MK, RS
      IN 2008DN09984 A
                                     20090320
                                                     IN 2008-DN9984
                                                                                   20081201
                              A 20090119 MX 2008-16542

A 20090305 KR 2008-731819

A 20090708 CN 2007-80024404

A 20090128 NO 2009-312
     MX 2008016542
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CN 101479245
                                                                                   20081219
                                                                                   20081229
                                                                                   20081229
      NO 2009000312
                                                                                   20090120
                                                      NO 2009-312
GB 2006-13156 A 20060630
GB 2006-13158 A 20060630
GB 2006-13159 A 20060630
PRIORITY APPLN. INFO.:
                                                      GB 2006-13160
                                                                              A 20060630
                                                      EP 2006-13160 A 20060630
EP 2006-117129 A 20060713
WO 2007-EP56632 W 20070702
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MARPAT 148:106207 OTHER SOURCE(S):

Quinolinone derivative compds. in salt or solvate form are useful for treating AΒ diseases mediated by the  $\beta 2\text{-adrenoreceptor.}$  Pharmaceutical compns. that contain the compds. and processes for preparing the compds. are also

described. Thus, for the preparation of

(R) - 5 - [2 - (5, 6 - diethylindan - 2 - ylamino) - 1 - hydroxyethyl] - 8 - hydroxy - 1H quinolin-2-one hydrogen succinate, suspension of 2.312 g

(R)-5-[2-(5,6-diethylindan-2-ylamino)-1-hydroxyethyl]-8-hydroxy-1Hquinolin-2-one base (5.890 mmoles) and 0.695 g succinic acid (5.890 mmoles) in 50 mL isopropanol was heated to 80°C and stirred.

Crystallization took place spontaneously after .apprx.5 min; yield: 2.89 g white

powder (96.3%).

936910-08-6P ΤТ

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

(quinolinone derivs. in salt or solvate form and their pharmaceutical compns. for treating obstructive airway diseases and inflammation mediated by the  $\beta 2$ -adrenoreceptor)

RN 936910-08-6 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy-, hydrochloride (1:1) (CA INDEX NAME)

Absolute stereochemistry.

● HCl

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 33 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 148:70158 CA

TITLE: Methods of using a thiazole derivative

INVENTOR(S): Molfino, Nestor A.; Saito, Kosuke; Nagamoto, Hisashi

PATENT ASSIGNEE(S): Otsuka Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 77 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT	NO.			KIN	D	DATE		-	APPL	ICAT	ION I	NO.		D	ATE	
WO 2007	2007148806 A1 2007122 W: AE, AG, AL, AM, AT, AU, A								WO 2	007-	JP62	 640		2	0070	 618
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	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,	FΙ,
	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,
	KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,	$ ext{ME}$ ,
	MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	ΝI,	NO,	NZ,	OM,	PG,	PH,	PL,
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RW:	ΑT,	BE,	ВG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HU,	ΙE,

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             GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
             BY, KG, KZ, MD, RU, TJ, TM
     AU 2007261951
                          Α1
                                 20071227
                                             AU 2007-261951
                                                                     20070618
     CA 2655296
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                                             CA 2007-2655296
                                                                     20070618
     EP 2040686
                          Α1
                                 20090401
                                             EP 2007-767448
                                                                     20070618
            AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
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             AL, BA, HR, MK, RS
     MX 2008015380
                          Α
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                                             MX 2008-15380
                                                                     20081202
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                          Α
                                 20090227
                                             KR 2008-731044
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     CN 101472570
                          Α
                                 20090701
                                             CN 2007-80023048
                                                                     20081219
PRIORITY APPLN. INFO.:
                                             US 2006-814545P
                                                                 Р
                                                                    20060619
                                             WO 2007-JP62640
                                                                    20070618
                                                                 W
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AB This invention relates to a method of treating a disease, disorder, or condition in a patient comprising administering to a patient a therapeutically effective amount of a thiazole derivative, tetomilast. The invention further relates to the administration of at least one  $\beta 2$ -adrenergic receptor agonist, with tetomilast for treating a disease, disorder, or condition. The invention further relates to the administration of an anti-inflammatory steroid, with tetomilast and at least one beta2-adrenergic receptor agonist for treating a disease, disorder, or condition.

IT 312753-33-6

RN

CN

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(5-[2-(5,6-Diethylindan-2-ylamino)-1-hydroxyethyl]-8-hydroxy-1H-quinolin-2-one; using thiazole derivative for respiratory disease therapy) 312753-33-6 CA

2(1H)-Quinolinone, 5-[2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 34 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 147:455537 CA

TITLE: Aerosol formulation comprising

 $6\alpha$ ,  $9\alpha$ -difluoro- $17\alpha$ -[(2-furanylcarbonyl)oxy]-11

 $\beta\text{-hydroxy-16}\alpha\text{-methyl-3-oxoandrosta-1,4-}$ 

diene- $17\beta$ -carbothioic acid S-fluoromethyl ester

INVENTOR(S): Capecchi, John T.; Stefely, James S. PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA

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SOURCE: PCT Int. Appl., 47pp.
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CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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PATENT NO.
                         KIND DATE APPLICATION NO.
                         A2 20071018 WO 2007-US64512 20070321
     WO 2007117911
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
              CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB,
              GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM,
              KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK,
             MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO,
              RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT,
              TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
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             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
     AU 2007234990 A1 20071018
                                              AU 2007-234990
                                 20071018 CA 2007-2646578
20081203 EP 2007-759008
                          A1
     CA 2646578
                                                                        20070321
     EP 1996158
                           A2
                                                                        20070321
         R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
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             AL, BA, HR, MK, RS
                      A1
     US 20090123391
                                  20090514
                                               US 2008-293205
                                                                        20080916
                                               US 2006-784670P P 20060322
WO 2007-US64512 W 20070321
PRIORITY APPLN. INFO.:
     This invention relates to pharmaceutical aerosol formulation includes a
AΒ
     therapeutically effective amount of particulate medicament
     6\alpha, 9\alpha-difluoro-17\alpha-[(2-furanylcarbonyl)oxy]-11
     \beta-hydroxy-16\alpha-methyl-3-oxoandrosta-1,4-diene-17\beta-
     carbothioic acid S-fluoromethyl ester or a solvate thereof, a propellant
     selected from the group consisting of 1,1,1,2-tetrafluoroethane,
     1,1,1,2,3,3,3-heptafluoro-n-propane or mixts. thereof, and a biocompatible
     polymer.
     312753-06-3, Indacaterol
TΤ
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (aerosol formulation comprising
        6\alpha, 9\alpha-difluoro-17\alpha-[(2-furanylcarbonyl)oxy]-11
        \beta-hydroxy-16\alpha-Me-3-oxoandrosta-1,4-diene-17\beta-
        carbothioic acid S-fluoromethyl ester)
     312753-06-3 CA
RN
     2(1H) -Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-
CN
     yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)
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Absolute stereochemistry.

L8 ANSWER 35 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 147:440002 CA

TITLE: Safety, tolerability and efficacy of indacaterol, a

novel once-daily  $\beta 2$ -agonist, in patients with

COPD: A 28-day randomized, placebo controlled clinical

trial

AUTHOR(S): Beier, Jutta; Chanez, Pascal; Martinot, Jean-Benoit;

Schreurs, A. J. M.; Tkacova, Ruzena; Bao, Weibin;

Jack, Damon; Higgins, Mark

CORPORATE SOURCE: Insaf Respiratory Research Institute, Wiesbaden,

D-65187, Germany

SOURCE: Pulmonary Pharmacology & Therapeutics (2007), 20(6),

740-749

CODEN: PPTHFJ; ISSN: 1094-5539

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal LANGUAGE: English

AΒ In patients with chronic obstructive pulmonary disease (COPD) classified as moderate onwards, Global Initiative for Chronic Obstructive Lung Disease (GOLD) Guidelines recommend regular treatment with one or more long-acting bronchodilators, such as  $\beta$ 2-agonists or anticholinergies. In contrast to currently available long-acting  $\beta$ 2-agonists, which have a duration of action of 12 h, indacaterol has demonstrated effective 24-h bronchodilation on once-daily dosing. A double-blind, randomized, placebo-controlled study was conducted to compare the safety, tolerability and efficacy of indacaterol with that of placebo, over a 28-day period, in patients with moderate COPD (as defined by GOLD 2001 criteria; equivalent to moderate-to-severe COPD in the GOLD 2005 criteria). Patients were randomized 2:2:1 to receive indacaterol 400  $\mu q$  or 800  $\mu q$  or placebo once-daily (between 07:00 and 11:00 h) via a single-dose dry-powder inhaler for 28 days. Assessments included monitoring of adverse events (AEs), blood chemical (including serum potassium and blood glucose), vital signs (blood pressure and heart rate), electrocardiograms and spirometry. One hundred and sixty-three patients were randomized, with 155 (95%) completing the study. There were no statistically significant differences between treatment groups in the overall incidence of AEs, with AEs reported by 35%, 51% and 25% of patients in the indacaterol 400  $\mu g$ , 800  $\mu g$  and placebo groups, resp. The majority of AEs were mild or moderate in severity, and there were no study-drug related serious AEs. There were no statistically significant differences between indacaterol groups and

placebo in mean pulse rate and QTc interval, and isolated statistically significant (p < 0.05) treatment-placebo differences in mean blood pressure, blood glucose and serum potassium. There was a statistically significant improvement in FEV1 vs. placebo at all post-baseline timepoints for both indacaterol treatment groups; 30 min post-dose, adjusted mean±SE FEV1 indacaterol-placebo differences were: Day 1,  $220\pm36$  mL and  $210\pm36$  mL; Day 14,  $320\pm50$  mL and  $270\pm50$  mL; Day 28,  $260\pm61$  mL and  $200\pm61$  mL for 400 and 800  $\mu$ g, resp. (all p < 0.01 vs. placebo). Bronchodilation was still apparent after 24 h, with pre-dose (i.e. trough) adjusted mean±SE FEV1 indacaterol-placebo differences of: Day 14,  $230\pm44$  mL and  $210\pm44$  mL; Day 28,  $220\pm49$ mL and 210 $\pm$ 49 mL for indacaterol 400 and 800  $\mu$ g, resp. (all p < 0.0001 vs. placebo). Once-daily indacaterol was well tolerated at doses up to 800  $\mu g$  with a good overall safety profile. There was no statistical difference at any dose between the safety of indacaterol and placebo. Furthermore, this study supports the previously demonstrated 24-h bronchodilator efficacy of indacaterol.1.

IT 312753-06-3, Indacaterol

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (safety, tolerability and efficacy of indacaterol, a novel once-daily  $\beta 2$ -agonist, in patients with chronic obstructive pulmonary disease)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 36 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 147:392432 CA

TITLE: Aerosol formulation comprising biocompatible polymer

INVENTOR(S): Capecchi, John; Stefely, James; Riley, Trevor PATENT ASSIGNEE(S): Glaxo Group Limited, UK; 3M Innovative Properties Company; Glaxo Wellcome Manufacturing Pte Ltd.

SOURCE: PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:

PF	ATENT	NO.			KIN		DATE								D.	ATE	
WC	200	 71096	98							 WO 2					2	 0070	 321
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		MN,	MW,	MX,	MY,	${ m MZ}$ ,	NA,	NG,	ΝI,	NO,	NΖ,	OM,	PG,	PH,	PL,	PT,	RO,
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EE																0070	-
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	2008									MX 2							
	1 101									CN 2							
	R 2008									KR 2							
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	se in																
						_										_	or in
pr	rovid:	ing e	nhan	ced	fine	par	ticl	e fr	acti	on (	FPF)	in	said	for	mula	tion	s.
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RI	L: THU	J (Th	erap	euti	c us	e);	BIOL	(Bi	olog	ical	stu	dy);	USE	S (U	ses)		
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2.1	2752	000	0.7														

2(1H) -Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-1]]

yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

312753-06-3 CA

RN

CN

L8 ANSWER 37 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 147:315055 CA

TITLE: Compounds and methods of treating disorders associated

with activation of metachromatic cells

INVENTOR(S): Maghni, Karim; Ouaked, Nadia; Lefort, Bertrand;

Favret, Sandra

PATENT ASSIGNEE(S): Valorisation Recherche HSCM, Limited Partnership, Can.

SOURCE: PCT Int. Appl., 100pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

	PAT	TENT	NO.			KIN	D	DATE			APPL	ICAT	ION 1	NO.		D.	ATE	
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			KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,
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	RS, RU,					SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ΤJ,	TM,	TN,	TR,	TT,
	TZ, UA, I					US,	UZ,	VC,	VN,	ZA,	ZM,	ZW						
		RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HU,	ΙE,
			IS,	ΙΤ,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,	ВJ,
			CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,	ΤG,	BW,	GH,
			GM,	ΚE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	ΑZ,	BY,
			KG,	KΖ,	MD,	RU,	ТJ,	TM,	AP,	EA,	EP,	OA						
	CA	2643	130			A1		2007	0830		CA 2	007-	2643	130		2	0070	222
	ΕP	1996	179			A2		2008	1203		EP 2	007-	7348	49		2	0070	222
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			IS,	IT,	LI,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	AL,
			ΒA,	HR,	MK,	RS												
PRIOR	RIT	Y APP	LN.	INFO	.:						US 2	006-	7753.	24P		P 2	0060	222
											WO 2	007-	IB16.	21	1	W 2	0070	222

AB The present invention relates to neurokinin- 1 (NK-1) receptor antagonists in combination with an inhibitor of metachromatic cell (i.e., mast cells and basophils) activation, such as an anti-inflammatory agent, an

immunosuppressor, or a kinase inhibitor, and use of such combinations in the treatment of disorders associated with activation of metachromatic cells. Disorders associated with the activation of metachromatic cells include allergic/non-allergic rhinitis, allergic/non-allergic asthma, allergic/non-allergic urticaria, immuno-inflammatory disorders, metachromatic cell-related autoimmune disorders, transplant rejection, and other metachromatic cell-related disorders.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(treatment of disorders associated with activation of metachromatic cells using neurokinin 1 receptor antagonists in combination with inhibitors of metachromatic cell activation)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 38 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 147:173628 CA

TITLE: Preparation of an inhalable dry powder formulation INVENTOR(S): Eber, Marcus; Kieckbusch, Thomas; Kaerger, Sebastian

PATENT ASSIGNEE(S): Novartis AG, Switz.

SOURCE: Brit. UK Pat. Appl., 9pp.

CODEN: BAXXDU

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2434098	А	20070718	GB 2005-26446	20051223
PRIORITY APPLN. INFO.:			GB 2005-26446	20051223
AR A process for preparation	aring di	ry nowder fo	rmulations for inhalati	on comprise

AB A process for preparing dry powder formulations for inhalation comprises mixing one or more active pharmaceutical ingredients (e.g., indacaterol maleate) with one or more ternary agents (e.g., Mg or Ca stearate) and then admixing carrier particles (e.g. lactose).

IT 753498-25-8

RL: PEP (Physical, engineering or chemical process); TEM (Technical or

engineered material use); THU (Therapeutic use); BIOL (Biological study);
PROC (Process); USES (Uses)

(inhalable dry powder formulation preparation)

RN 753498-25-8 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy-, (2Z)-2-butenedioate (1:1) (CA INDEX NAME)

CM 1

CRN 312753-06-3 CMF C24 H28 N2 O3

Absolute stereochemistry.

CM 2

CRN 110-16-7 CMF C4 H4 O4

Double bond geometry as shown.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 39 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 147:133794 CA

TITLE: Indacaterol, a novel inhaled  $\beta$ 2-agonist provides

sustained 24-h bronchodilation in asthma

AUTHOR(S): Beeh, K. M.; Derom, E.; Kanniess, F.; Cameron, R.;

Higgins, M.; van As, A.

CORPORATE SOURCE: Insaf Respiratory Research Institute, Wiesbaden,

Germany

SOURCE: European Respiratory Journal (2007), 29(5), 871-878

CODEN: ERJOEI; ISSN: 0903-1936

PUBLISHER: European Respiratory Society

DOCUMENT TYPE: Journal LANGUAGE: English

The present study examined the bronchodilator and safety profiles of AB single-dose indacaterol in intermittent or persistent asthma. In the present double-blind crossover study, 42 patients were randomized to receive single doses of indacaterol (50, 100, 200 and 400 μg) or placebo via a hydrofluoroalkane pressurized metered-dose inhaler. primary efficacy comparisons were the per cent changes in forced expiratory volume in one second (FEV1) between indacaterol and placebo 30 min and 21 h post-dose. All doses resulted in prolonged bronchodilation, with indacaterol 200 and 400  $\mu g$  meeting pre-specified efficacy criteria. The mean percentage increases in FEV1 from placebo with indacaterol 200 and 400  $\mu g$  were 7.6 and 14.9%, resp., at 30 min, and 7.5 and 10.4%, resp., at 21 h post-dose. At these doses, changes in mean FEV1 relative to placebo were statistically significant from 5 min to 25 h, inclusive. At 5 min, the geometric least squares mean values for FEV1 were 3.08 and 3.22 L for the 200 and 400  $\mu g$  doses, resp., compared with 2.99 L for placebo. At 24 h after dosing, the baseline-adjusted geometric least square mean FEV1 was 3.13, 3.11, 3.24 and 3.30 L for indacaterol 50, 100, 200 and 400  $\mu$ q, resp., and 2.98 L for placebo. All treatments were well tolerated. Once-daily indacaterol at doses of 200 and 400  $\mu \mathrm{g}$ provided sustained 24-h bronchodilation, with a rapid onset and a good tolerability and safety profile.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(bronchodilator and safety profiles single-dose indacaterol in treatment of intermittent and persistent asthma)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 40 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 147:132518 CA

TITLE: Ultra-long-acting  $\beta 2$ -adrenoceptor agonists: an emerging therapeutic option for asthma and COPD?

10/552,023

Matera, Maria Gabriella; Cazzola, Mario AUTHOR(S): CORPORATE SOURCE:

Department of Experimental Medicine, Unit of

Pharmacology, The Second University of Naples, Naples,

Italv

SOURCE: Drugs (2007), 67(4), 503-515 CODEN: DRUGAY; ISSN: 0012-6667

PUBLISHER: Wolters Kluwer Health DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

A review. There has been a real interest recently in developing AB once-daily  $\beta$ 2-adrenoceptor agonists (ultra-long-acting  $\beta$ 2-adrenoceptor agonists [ultra-LABAs]) for treating asthma and chronic obstructive pulmonary disease (COPD) in an attempt to simplify their management, although an increasing amount of convincing data show an association of LABAs with a rise in asthma-related deaths and life-threatening experiences. This paper reviews the effects of different ultra-LABAs that are at varying stages of development. Arformoterol, carmoterol, indacaterol and GSK-159797 are ultra-LABAs that are likely to be introduced into the market before 2010. It is plausible that once-daily dose administration of an LABA will lead to increased convenience for patients, which may also lead to enhancement of adherence, and may have advantages leading to improved overall clin. outcomes in patients with asthma and COPD.

312753-06-3, Indacaterol ΙT

> RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ultra-long-acting indacaterol may lead to increased convenience, enhanced adherence and improve clin. outcome in patient with asthma and chronic obstructive pulmonary disease)

312753-06-3 CA RN

2(1H) -Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-CN yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

71 REFERENCE COUNT: THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 41 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 147:125812 CA

TITLE: Novel combination of anticholinergics,  $\beta$ 2-adrenoceptor agonists, antileukotrienes (leukotriene receptor antagonists), glucocorticoids

and/or PDE 4 inhibitors for the treatment of

inflammatory diseases

INVENTOR(S): Maus, Joachim; Kastrup, Horst; Bauhofer, Artur; Cnota,

Peter; Szelenyi, Istvan

PATENT ASSIGNEE(S): Meda Pharma Gmbh & Co KG, Germany

SOURCE: PCT Int. Appl., 39pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA:	FENT	NO.			KIN	D	DATE			APPI	LICAT	ION 1	NO.		D.	ATE	
	2007 2007									WO 2	2006-	EP11	536		2	0061	201
	W:	ΑE,	AG,	AL,	AM,	ΑT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
											EC,						
		GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KM,	KN,
		KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,
		MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NΙ,	NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,
		RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ТJ,	TM,	TN,	TR,	TT,
		TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	. ZW						
	RW:										ES,						
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_	2632				A1						2006-						
EР	1971										2006-					0061	
	K:		,	,		,	,	,	•	,	ES,	,	,	,	,	,	
TD	2009										PT, 2008-					1K, 0061.	
	2009										2006- 2006-					0061	
	2007				A		2007				2008-		_			0081	
	1013				A		2008				2006-					0080	
	2008						2008				2008-					0080	
	2008				A		2008	-			2008					0080	-
	Y APP						_000	J J			2005-					0051	
			0	. •							2006-:					0061	
							-				1						

AB The invention relates to novel combinations based on anticholinergics,  $\beta 2\text{-adrenoceptor}$  agonists, PDE 4 inhibitors, glucocorticoids, and leukotriene-receptor antagonists, process for their production and their use for the treatment of inflammatory diseases, preferably respiratory diseases as bronchial asthma and chronic obstructive pulmonary diseases or rheumatic or autoimmune diseases. Thus, 3-in-1 combination (budesonide, rolipram and R,R-glycopyrrolate) resulted in statistically significant over-additive inhibition of the TNF $\alpha$  release.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(combination of anticholinergics and  $\beta 2$ -adrenoceptor agonists and antileukotrienes and glucocorticoids for treatment of inflammatory diseases)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 42 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 147:16522 CA

TITLE: Combination of  $\beta$ 2-adrenoceptor agonist,

glycopyrrolate and antiinflammatory corticosteroid for

therapy of inflammatory or obstructive airways

diseases

INVENTOR(S): Collingwood, Stephen Paul; Haeberlin, Barbara

PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis Pharma GmbH

SOURCE: PCT Int. Appl., 34pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PA'	TENT	NO.			KIN	D	DATE			APPL	ICAT	ION 1	NO.		D	ATE	
	2007						2007			WO 2	006-	EP11	 113		2	0061	120
WO	2007	0572	21		А3		2007	1122									
	W:	ΑE,	AG,	ΑL,	ΑM,	ΑT,	ΑU,	ΑZ,	BA,	BB,	ВG,	BR,	BW,	BY,	ΒZ,	CA,	CH,
		CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FΙ,	GB,	GD,
		GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KM,	KN,
		KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,
		MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NΙ,	NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,
		RS,	RU,	SC.	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	TJ,	TM,	TN,	TR.	TT,
		•	•	•	•	•	VC,	,	•	•	•	,	,	,	,	,	,
	RW:	ΑT,	•	•	•	•	•	•	•	•		FI,	FR.	GB,	GR,	HU,	IE.
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דזב	2006						2007	,		AU 2		3147	22		2	0061	120
	2628				A1		2007			CA 2					_	0061	
	1965				A2		2007								_	0061	
ĽР																–	
	R:	ΑT,						,		•							IE,
		IS,	ΙΤ,	LI,	LT,	LU,	LV,	MC,	ΝL,	PL,	PΤ,	RO,	SE,	SI,	SK,	TR	

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    JP 2009516661
                             20090423 JP 2008-540531
                                                             20061120
    IN 2008DN04132
                      A
                             20080801 IN 2008-DN4132
                                                             20080514
                      A
    CN 101309683
                             20081119 CN 2006-80042891
                                                             20080516
                      A 20080528 MX 2008-6500
A 20080725 KR 2008-711997
    MX 2008006500
                                                             20080520
    KR 2008069197
                                                             20080520
    US 20080286363
                      A1
                             20081120
                                        US 2008-94373
                                                             20080520
PRIORITY APPLN. INFO.:
                                        GB 2005-23656
                                                          A 20051121
                                        WO 2006-EP11113
                                                          W 20061120
                  CASREACT 147:16522; MARPAT 147:16522
OTHER SOURCE(S):
```

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

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A medicament comprising, sep. or together, (A) a compound of formula (I; R1
AΒ
     = H, OH, C1-10-alkoxy; R2, R3 = H, C1-10-alkyl; R4-7 = H, halogen, cyano,
     OH, C1-10-alkoxy, C6-10-aryl, C1-10-alkyl, substituted C1-10-alkyl,
     C2-10-alkenyl, trialkylsilyl, carboxy, C1-10-alkoxycarbonyl, amido; R4-R5,
     R5-R6 or R6-R7 together with carbon atoms to which they are attached
     denote carbocyclic or heterocyclic ring; Rx, Ry = CH2 or (CH2)2; W = II;
     R8-10 = H, C1-4-alkyl) in free, salt or solvate form, (B) a glycopyrronium
     salt, and (C) a compound of formula (III; T = monovalent cyclic organic group
     having 3-15 atoms in the ring system); for simultaneous, sequential or
     sep. administration in the treatment of an inflammatory or obstructive
     airways disease is proposed. The proposed medicament may further comprise
     another drug substance which is an antiinflammatory, a bronchodilator, an
     antihistamine, a decongestant or an antitussive drug substance. The
     medicament is in inhalable form, as an aerosol or a dry powder.
     Medicaments of the invention are advantageous in the treatment,
     symptomatic or prophylactic, of inflammatory or obstructive airways
     disease, exhibiting highly effective bronchodilatory and antiinflammatory
     properties. Thus, gelatin capsules suitable for use in a capsule inhaler
     were prepared by mixing dry powders of
     (R) - 5 - [2 - (5, 6 - diethylindan - 2 - ylamino) - 1 - hydroxyethyl] - 8 - hydroxy - 1 H -
     quinolin-2-one maleate (preparation given) 20 parts,
     3-[(Cyclopentylhydroxyphenylacetyl)oxy]-1,1-dimethylpyrrolidinium bromide
     50 parts, 3-methylthiophene-2-carboxylic acid
     (6S, 9R, 10S, 1S, 13S, 16R, 17R) -9-chloro-6-fluoro-11-hydroxy-17-methoxycarbonyl-
     10, 13, 16-trimethyl-3-oxo-6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17-dodecahydro-3H-
     cyclopenta[a]phenanthren-17-yl ester 50 parts, and lactose monohydrate
     19880 parts.
    753498-25-8P
ΤT
     RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (combination of \beta2-adrenoceptor agonist, glycopyrrolate and
        antiinflammatory corticosteroid for therapy of inflammatory or
        obstructive airways diseases)
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RN 753498-25-8 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy-, (2Z)-2-butenedioate (1:1) (CA INDEX NAME)

CM 1

CRN 312753-06-3

CMF C24 H28 N2 O3

Absolute stereochemistry.

CM 2

CRN 110-16-7 CMF C4 H4 O4

Double bond geometry as shown.

L8 ANSWER 43 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 146:514776 CA

TITLE: Treatment of asthma and COPD using triple-combination

therapy

INVENTOR(S): Collingwood, Stephen Paul; Haeberlin, Barbara PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis Pharma GmbH

SOURCE: PCT Int. Appl., 32pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT NO.	KIND DATE	APPLICATION NO.	DATE
WO 2007057219	A1 20070524	WO 2006-EP11108	20061120
W: AE, AG, AL,	AM, AT, AU, AZ,	BA, BB, BG, BR, BW, BY,	BZ, CA, CH,
CN, CO, CR,	CU, CZ, DE, DK,	DM, DZ, EC, EE, EG, ES,	FI, GB, GD,
GE, GH, GM,	GT, HN, HR, HU,	ID, IL, IN, IS, JP, KE,	KG, KM, KN,
KP, KR, KZ,	LA, LC, LK, LR,	LS, LT, LU, LV, LY, MA,	MD, MG, MK,
MN, MW, MX,	MY, MZ, NA, NG,	NI, NO, NZ, OM, PG, PH,	PL, PT, RO,
RS, RU, SC,	SD, SE, SG, SK,	SL, SM, SV, SY, TJ, TM,	TN, TR, TT,
TZ. UA. UG.	US. UZ. VC. VN.	7.A. 7.M. 7.W	

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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
     AU 2006314720
                                 20070524
                                             AU 2006-314720
                          Α1
                                                                     20061120
     CA 2628321
                          A1
                                 20070524
                                             CA 2006-2628321
                                                                    20061120
     EP 1957072
                          Α1
                                 20080820
                                             EP 2006-818673
                                                                     20061120
             AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
     JP 2009516660
                          Τ
                                20090423
                                             JP 2008-540530
                                                                     20061120
     IN 2008DN02984
                          Α
                                20080808
                                             IN 2008-DN2984
                                                                    20080410
                                             US 2008-93663
     US 20080279948
                                20081113
                                                                    20080514
                          Α1
     MX 2008006501
                                20080528
                                             MX 2008-6501
                          Α
                                                                    20080520
                                20080722
                                             KR 2008-711991
     KR 2008068085
                                                                    20080520
                          Α
     CN 101312729
                                             CN 2006-80043314
                                                                    20080520
                                20081126
                          Α
PRIORITY APPLN. INFO.:
                                             GB 2005-23655
                                                                 A 20051121
                                                                 W 20061120
                                             WO 2006-EP11108
OTHER SOURCE(S):
                        MARPAT 146:514776
```

GΙ

A medicament comprising, sep. or together (A) a compound with  $\beta$ 2-agonist activity such as (R)-5-[2-(5,6-diethylindan-2-ylamino)-1hydroxyethyl]-8-hydroxy-1H-quinolin-2-one maleate (I maleate), (B) a glycopyrronium salt (which are antimuscarinic agents), and (C) mometasone furoate (an anti-inflammatory corticosteroid) for simultaneous, sequential or sep. administration in the treatment of an obstructive airways disease. 312753-16-5 ΤТ

Ι

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(treatment of obstructive airway disease using triple-combination therapy with  $\beta$ 2 adrenergic agonist and glycopyrronium salt and mometasone furoate and other agents)

RN 312753-16-5 CA

CN 2(1H) -Quinolinone, 5-[2-[(2,3-dihydro-1H-inden-2-y1)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

REFERENCE COUNT: THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS 8 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 44 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 146:475297 CA

TITLE: Effect of indacaterol, a novel long-acting

 $\beta$ 2-agonist, on isolated human bronchi

Naline, E.; Trifilieff, A.; Fairhurst, R. A.; Advenier, C.; Molimard, M. AUTHOR(S):

CORPORATE SOURCE: Research Unit EA220, Faculty of Medicine, Hospital

Foch, Versailles University, Suresnes, Fr.

European Respiratory Journal (2007), 29(3), 575-581 SOURCE:

CODEN: ERJOEI; ISSN: 0903-1936

PUBLISHER: European Respiratory Society Journal DOCUMENT TYPE:

LANGUAGE: English

Indacaterol is a novel  $\beta$ 2-adrenoceptor agonist in development for the AR once-daily treatment of asthma and chronic obstructive pulmonary disease. The present study evaluated the relaxant effect of indacaterol on isolated human bronchi obtained from lungs of patients undergoing surgery for lung carcinoma. Potency (-logEC50), maximal relaxant effect (Emax) and onset of action were determined at resting tone. Duration of action was determined against cholinergic neural contraction induced by elec. field stimulation (EFS). At resting tone,  $-\log EC50$  and Emax values were 8.82  $\pm$  0.41 and 77  $\pm$  5% for indacaterol, 9.84  $\pm$  0.22 and 94  $\pm$  1% for formoterol,  $8.36 \pm 0.16$  and  $74 \pm 4\%$  for salmeterol, and  $8.43 \pm 0.22$  and 84± 4% for salbutamol, resp. In contrast to salmeterol, indacaterol did not antagonize the isoprenaline response. Indacaterol's onset of action  $(7.8 \pm 0.7 \text{ min})$  was not significantly different from that of formoterol  $(5.8 \pm 0.7 \text{ min})$  or salbutamol  $(11.0 \pm 4.0 \text{ min})$ , but it was significantly faster than that of salmeterol (19.4  $\pm$  4.3 min). EFS-induced contractions were inhibited with -logIC50 values of 6.96  $\pm$ 0.13 (indacaterol),  $8.96 \pm 0.18$  (formoterol),  $7.\overline{18} \pm 0.34$ (salmeterol) and  $6.39 \pm 0.26$  (salbutamol). Duration of action was >12 h for indacaterol and salmeterol, and 35.3  $\pm$  8.8 and 14.6  $\pm$  3.7 min for formoterol and salbutamol, resp. In isolated human bronchi, indacaterol behaved as a long-acting  $\beta$ 2-adrenoceptor agonist with high intrinsic efficacy and fast onset of action.

312753-06-3, Indacaterol ΙT

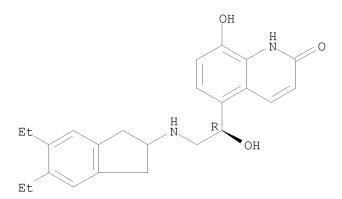
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(indacaterol showed long-acting  $\beta$ 2-adrenoceptor agonist activity with high intrinsic efficacy and fast onset of action like formoterol or salbutamol and faster than salmeterol in bronchi isolated from lung carcinoma patient)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 45 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER:

146:462251 CA

TITLE:

Preparation of indazolyl-substituted sulfonamides and analogs as glucocorticoid receptor modulators in the

treatment of inflammatory diseases

INVENTOR(S):

Bladh, Haakan; Dahmen, Jan; Hansson, Thomas; Henriksson, Krister; Lepistoe, Matti; Nilsson,

Stinabritt

PATENT ASSIGNEE(S):

Astrazeneca AB, Swed.; Schering A.-G.

SOURCE: PCT Int. Appl., 91pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent English

LANGUAGE:

'OIINT • 1

FAMILY ACC. NUM. COUNT:

PA:	TENT	NO.			KIN	D	DATE		1	APPL	ICAT	ION I	NO.		D.	ATE	
WO	2007	0467	 47		A1	_	2007	0426	1	wo 2	006-	==== SE11:	 81		2	 0061	018
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		CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FΙ,	GB,	GD,
		GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KM,	KN,
	KP, KR, K			KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,
	MN, MW, N			MX,	MY,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,
	MN, MW, M RS, RU, S			SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ΤJ,	TM,	TN,	TR,	TT,
		TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW						
	RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,	IE,
		IS,	ΙT,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,	ВJ,
		CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,	ΤG,	BW,	GH,
		GM,	KΕ,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	ΑM,	ΑZ,	BY,
		KG,	KΖ,	MD,	RU,	ΤJ,	TM										
CA	2628	577			A1		2007	0426	(	CA 2	006-	2628	577		2	0061	018

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EP 1940800
                               20080709
                                         EP 2006-799780
                         Α1
                                                                   20061018
         R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
     JP 2009512687
                         Т
                                           JP 2008-536543
                                                                   20061018
                                20090326
     IN 2008DN02109
                          Α
                                20090320
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                                                                   20080312
     CN 101291914
                          Α
                                20081022
                                            CN 2006-80039290
                                                                   20080421
     US 20090124607
                         Α1
                                20090514
                                            US 2008-90442
                                                                   20080814
PRIORITY APPLN. INFO.:
                                            SE 2005-2325
                                                               A 20051020
                                            SE 2006-747
                                                               A 20060403
                                            WO 2006-SE1181
                                                               W 20061018
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OTHER SOURCE(S): MARPAT 146:462251

AB Title compds. represented by the formula I [wherein A = Ph, naphthyl, pyridinyl, etc.; R1 = H; R2 = H, (halo)alkyl or cyclo(halo)alkyl; R3 = H or (halo)alkyl; R3a = H or alkyl; R4 = H, halo or (halo)alkyl; T = CH or N; Q1, Q2 = independently CY' or N; Y, Y' = H, halo, alkyl, etc.; W = Ph, cycloalkyl, thienyl, isoxazolyl, etc.; X = CH2, S, NH, etc.; and pharmaceutically acceptable salts thereof] were prepared as glucocorticoid receptor modulators. For example, II was provided in a multi-step synthesis starting from reaction of L-alaninol with 2,4,6-trimethylbenzenesulfonyl chloride. II was tested in human glucocorticoid receptor assay with an IC50 value of 2.9 nM. Thus, I and their pharmaceutical compns. are useful in treatment of a glucocorticoid receptor mediated disease state.

ΙI

IT 312753-06-3, Indacaterol

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (combination therapy agent; preparation of indazolyl-substituted sulfonamides and analogs as glucocorticoid receptor modulators in treatment of inflammatory diseases)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 46 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 146:302287 CA

TITLE: Combination of compounds, which can be used in the

treatment of respiratory diseases, especially chronic

obstructive pulmonary disease (COPD) and asthma

INVENTOR(S): Eriksson, Tomas; Hansson, Johan

PATENT ASSIGNEE(S): Astrazeneca AB, Swed. SOURCE: PCT Int. Appl., 53pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT	NO.			KIN	D	DATE			APPL:	ICAT	ION 1	NO.		D.	ATE	
WO 2007	0241	82		A1		2007	0301	1	WO 2	006-	SE97	0		2	0060	824
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	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,
	GE,	GH,	GM,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KM,	KN,	KP,
	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,	MN,
	MW,	MX,	MY,	MZ,	NA,	NG,	NΙ,	NO,	NΖ,	OM,	PG,	PH,	PL,	PT,	RO,	RS,
	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ΤJ,	TM,	TN,	TR,	TT,	TZ,
	UA,	UG,	US,	UΖ,	VC,	VN,	ZA,	ZM,	ZW							
RW:	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HU,	ΙE,
	IS,	ΙT,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,	ВJ,
	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	$\mathrm{ML}_{m{\prime}}$	MR,	ΝE,	SN,	TD,	ΤG,	BW,	GH,
	GM,	KΕ,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	ΑM,	ΑZ,	BY,
			MD,													
AU 2006	2821	21		A1		2007	0301		AU 2	006-	2821.	21		2	0060	824
CA 2620															0060	824
EP 1922						2008									0060	
R:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HU,	ΙE,
	IS,	ΙT,	LI,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	AL,
			MK,													
JP 2009	5060	28		T		2009	0212		JP 2	008-	5278	74		2	0060	824
MX 2008				Α		2008			MX 2		_				080	
KR 2008	30383	61		А		2008	0506		KR 2	008-	7045	12		2	0080	225

IN 2008DN01805	А	20090320	IN	2008-DN1805		20080229
NO 2008001480	A	20080516	ИО	2008-1480		20080326
CN 101296701	A	20081029	CN	2006-80040238		20080428
PRIORITY APPLN. INFO.:			SE	2005-1896	A	20050826
			SE	2006-1220	A	20060601
			WO	2006-SE970	W	20060824

OTHER SOURCE(S): MARPAT 146:302287

$$(R^1)_{m} \xrightarrow{N} \qquad N \qquad N \qquad R^3$$

$$R^2 \qquad OH \qquad R^4$$

AB The present invention provides pharmaceutical compns. comprising a glucocorticosteroid and a compound of formula (I): wherein m is 0, 1 or 2; each R1 independently represents halogen or cyano; R2 represents a hydrogen atom or methyl; R3 represents the group C1-C4 alkyl; and R4 represents hydrogen or halogen; or a pharmaceutically acceptable salt thereof.

Ι

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(combination of compds., which can be used in the treatment of respiratory diseases, especially COPD and asthma)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 47 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 146:266794 CA

TITLE: A combination of compounds, which can be used in the

treatment of respiratory diseases, especially chronic

obstructive pulmonary disease (COPD) and asthma

INVENTOR(S): Eriksson, Tomas; Hansson, Johan

PATENT ASSIGNEE(S): Astrazeneca AB, Swed. SOURCE: PCT Int. Appl., 44pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA:	TENT 1	NO.			KIN	D	DATE			APE	PLI	CAT	I NOI	. OV		Ε	ATE	
WO	2007	02418	33		A1	<del>_</del>	2007	0301		WO	20	06-9	SE97:	 1		2	0060	824
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		CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	D2	Ζ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,
							HU,											
		KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU	J,	LV,	LY,	MA,	MD,	MG,	MK,	MN,
		MW,	MX,	MY,	MΖ,	NA,	NG,	NI,	NO,	NZ	Ζ,	OM,	PG,	PH,	PL,	PT,	RO,	RS,
							SK,											
		UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ΖV	V							
	RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EF	Ξ,	ES,	FI,	FR,	GB,	GR,	HU,	ΙE,
		LT,	LU,	LV,	MC,	NL,	PL,	PΊ	Γ,	RO,	SE,	SI,	SK,	TR,	BF,	ВJ,		
	CF, CG, C				CM,	GΑ,	GN,	GQ,	GW,	MI	J,	MR,	NE,	SN,	TD,	ΤG,	BW,	GH,
	GM, KE, L				MW,	MΖ,	NA,	SD,	SL,	SZ	Ζ,	TZ,	UG,	ZM,	ZW,	ΑM,	ΑZ,	BY,
	GM, KE, L KG, KZ, M				RU,	ТJ,	$_{ m TM}$											
AU	2006	28212	22		A1		2007	0301		ΑU	20	06-2	28212	22		2	0060	824
CA	2620	281			A1		2007	0301		CA	20	06-2	26202	281		2	0060	824
EP	1922	070			A1		2008	0521		EΡ	20	06-	76962	27		2	0060	824
	R:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EF	Ξ,	ES,	FI,	FR,	GB,	GR,	HU,	IE,
		IS,	ΙΤ,	LI,	LT,	LU,	LV,	MC,	NL,	PΙ	J,	PT,	RO,	SE,	SI,	SK,	TR,	HR
JP	2009	50602					2009	0212		JΡ	20	008-5	5278	75		2	0060	824
MX	2008	00232	20		Α		2008	0314		MX	20	008-2	2320			2	0800	218
KR	2008	0381	-				2008	0502		KR	20	008-	7045	11		2	0800	225
IN	2008	DN01			А					ΙN	20	I-80(	DN18	04		2	0800	229
ИО	2008	00148	33		Α		2008	0516		ИО	20	008-1	1483			2	0800	326
CN	NO 2008001483 CN 101296698				Α		2008	1029		CN	20	06-8	30040	0270		2	0800	428
RIORIT	Y APP	LN.	INFO	.:						SE	20	05-1	1895			A 2	0050	826
										SE	20	06-1	1221			A 2	0060	601
										WO	20	06-5	SE97	1	1	W 2	0060	824
THER SO	OURCE	(S):			MAR	PAT	146:	26679	94									

(5):

GΙ

$$(R^1)_m$$
 $N$ 
 $R^2$ 
 $OH$ 
 $R^4$ 

AB The present invention provides pharmaceutical compns. comprising a  $\beta 2\text{-agonist}$ , and a compound of formula (I): wherein m is 0, 1 or 2; each R1 independently represents halogen or cyano; R2 represents a hydrogen atom or methyl; R3 represents the group C1-C4 alkyl; and R4 represents hydrogen or halogen; or a pharmaceutically acceptable salt thereof.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(combination of compds., which can be used in treatment of respiratory diseases, especially COPD and asthma)  $\,$ 

Ι

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 48 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 146:142674 CA

TITLE: Preparation of pyridopyrimidine derivatives as phosphodiesterase-4 (PDE4) inhibitors for the

treatment of inflammatory and immune diseases Lisius, Annea; Nikitidis, Grigorios; Sjoe, Peter

PATENT ASSIGNEE(S): Astrazeneca AB, Swed.

SOURCE: PCT Int. Appl., 102pp.

CODEN: PIXXD2

INVENTOR(S):

DOCUMENT TYPE: Patent LANGUAGE: English FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

P	ATENT	NO.			KIN	D	DATE			APPI	ICAT		DATE				
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		GE,	GH,	GM,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KM,	KN,	ΚP,
		KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,	MN,
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		CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,	ΤG,	BW,	GH,
		GM,	ΚE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	ΑM,	ΑZ,	BY,
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J	JP 2009500405						2009	0108		JP 2	2008-		20060703				
U	US 20080227797						2008	0918		US 2	2008-		20080103				
I	IN 2008DN00716						2009	0320			2008-		20080123				
С	N 1012	5815	2		Α		2008	0903		CN 2	2006-	8003	2368		2	0080	304
PRIORI	TY APP	LN.	INFO	.:					SE 2005-1564						A 2	0050	704
										SE 2006-516					A 2	0060	308
										WO 2	2006-	SE82	6		W 2	0060	703
OTHED	COLIDOR	101.		MAD	דעכ	1/6.	1126	7.4									

OTHER SOURCE(S): MARPAT 146:142674

GI

AB The title compds. I [A = N, CA1; E = N, CE1; T = CO, SO2; X = C, S; W = (CH2)n; Y = (CH2)p; n, p = 0 or 1; L = CH, N; when L is CH then J is NH; when L is N then J is absent and T is bonded directly to L; R1 = (un)substituted aryl, heteroaryl; R2 = (un)substituted alkyl, (un)substituted cycloalkyl, (un)substituted heterocyclyl, etc.; A1, E1, G1 = H, halo, cyano, etc.] or N-oxides thereof or pharmaceutically acceptable salts thereof are prepared Thus, N-(cis-4-[1-(3,4-difluorophenyl)-6-fluoro-2,4-dioxo-1,4-dihydropyrido[2,3-d]pyrimidin-3(2H)-yl]cyclohexyl)-2-hydroxy-5-(hydroxymethyl)benzamide was prepared in a multistep process starting from 2-chloro-5-fluoronicotinic acid and 3,4-difluoroaniline. In an assay for inhibition of human PDE4B2, compds. of this invention showed IC50 values

Ι

of  $0.4 \, \text{nM}$  to  $432 \, \text{nM}$ .

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(pharmaceutical combination; preparation of pyridopyrimidine derivs. as PDE4

inhibitors for treatment of inflammatory and immune diseases)

RN 312753-06-3 CA

CN 2(1H) -Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-(1H)-2]

yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

## Absolute stereochemistry.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 49 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 146:87582 CA

TITLE: MRP4 inhibitors for the treatment of respiratory

diseases

INVENTOR(S): Goeggel, Rolf; Cui, Yunhai

PATENT ASSIGNEE(S): Boehringer Ingelheim International GmbH, Germany;

Boehringer Ingelheim Pharma Gmbh & Co. KG

SOURCE: PCT Int. Appl., 63pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT NO.	KIN	D i	DATE			APPL	ICAT	DATE							
WO 2006134022				_	 2006	1221	,	WO 2	006-		20060530				
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CN	, co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,
GE	, GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KM,	KN,	KP,	KR,
KZ	, LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,	MN,	MW,	MX,
MZ	, NA,	NG,	NI,	NO,	NΖ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,
SG	, SK,	SL,	SM,	SY,	ТJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,
VV.	, YU,	ZA,	ZM,	ZW											
RW: AI	, BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,	ΙE,
IS	, IT,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,	ВJ,
CF	, CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,	ΤG,	BW,	GH,

GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

CA 2611907 A1 20061221 CA 2006-2611907 20060530 EP 1898894 A1 20080319 EP 2006-763346 20060530

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

JP 2008543806 Τ 20081204 JP 2008-516268 20060530 US 20060286041 Α1 20061221 US 2006-424596 20060616 PRIORITY APPLN. INFO.: EP 2005-105363 20050617 Α WO 2006-EP62690 20060530

OTHER SOURCE(S): MARPAT 146:87582

AB The present invention relates to the use of MRP4 inhibitors for the treatment of respiratory diseases, pharmaceutical compns. containing them and processes for the preparation thereof.

IT 312753-33-6, 5-[2-(5,6-Diethylindan-2-ylamino)-1-hydroxyethyl]-8-hydroxy-1H-quinolin-2-one

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(betamimetic; MRP4 inhibitors in combination with other therapeutic agents for treatment of respiratory diseases)

RN 312753-33-6 CA

CN 2(1H)-Quinolinone, 5-[2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 50 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 146:50272 CA

TITLE: Indacaterol derivatives and phosphodiesterase inhibitors for the treatment of airway diseases

INVENTOR(S):
Trifilieff, Alexandre

PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis Pharma GmbH

SOURCE: PCT Int. Appl., 31pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT NO	0.		KIN	D	DATE			APPL	ICAT	DATE					
WO 20061	A1		20061207			WO 2	006-	20060530							
W: 1	AE, AG,	AL,	AM,	AT,	ΑU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
(	CN, CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,

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GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
             KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
             MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
             SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
             VN, YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
     AU 2006254318
                          Α1
                                 20061207
                                             AU 2006-254318
                                                                    20060530
                                20061207
     CA 2609522
                          Α1
                                             CA 2006-2609522
                                                                     20060530
     EP 1890699
                                20080227
                                             EP 2006-753987
                                                                     20060530
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            AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
     JP 2008542319
                          Τ
                                20081127
                                            JP 2008-514006
                                                                     20060530
     IN 2007DN08166
                                20080704
                                             IN 2007-DN8166
                          Α
                                                                     20071022
     CN 101180058
                                20080514
                                             CN 2006-80017568
                                                                    20071120
                          Α
                                             US 2007-921189
     US 20090041675
                          Α1
                                20090212
                                                                    20071128
     MX 2007015081
                          Α
                                 20080117
                                             MX 2007-15081
                                                                     20071129
     KR 2008013960
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                                20080213
                                             KR 2007-727824
                                                                     20071129
PRIORITY APPLN. INFO.:
                                             GB 2005-11066
                                                                    20050531
                                             WO 2006-EP5154
                                                                    20060530
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OTHER SOURCE(S): MARPAT 146:50272

AB A medicament comprising sep. or together, (A) a compound of formula (I) in free or salt or solvate form, where W, Rx, Ry, R1, R2, R3, R4, R5, R6 and R7 have the meanings as indicated in the specification, and (B) one or more of compds. selected from the group consisting of PDE4 inhibitors and PDE5 inhibitors, for simultaneous, sequential or sep. administration in the treatment of an inflammatory or obstructive airways disease.

IT 312753-06-3

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(indacaterol derivs. and phosphodiesterase inhibitors for treatment of airway diseases)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS

## RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 51 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 146:50270 CA

TITLE: Medicament containing organic compounds

PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis Pharma GmbH; Trifilieff,

Alexandre

SOURCE: PCT Int. Appl., 23pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA:	TENT	NO.			KIND DATE				APE	PL:	ICAT:		DATE						
				20061207 20070405			WO 2006-EP5153					20060530							
	W:	ΑE,	AG,	AL,	AM,	ΑT,	AU,	AZ,	BA,	BE	3,	BG,	BR,	BW,	BY,	BZ	CA,	CH,	
		CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ	Ζ,	EC,	EE,	EG,	ES,	FΙ	GB,	GD,	
	GE, GH, GM,		GM,	HR,	HU,	ID,	IL,	IN,	ΙS	3,	JP,	KΕ,	KG,	KΜ,	KN	, KP,	KR,		
	KZ, LC, LK		,		,	,	,	,		,		,		,		•	,		
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		VN,	YU,	ZA,	ZM,	ZW													
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	2608704				A1	CA 2006-2608704													
EP	1962								EP 2006-753986										
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	2008					JP 2008-514005													
	IN 2007DN08165									IN 2007-DN8165									
					A 2008														
	2007							-				007-1					20071		
	2008				А		2008	0213				007-		-			20071		
IORIT	Y APP	LN.	INFO	.:								005-1					20050		
										WO	2 (	006-I	EP51.	53		W 2	20060	530	
HER SO		MARPAT 146:50270				0													

OTHER SOURCE(S): MARPAT 146:50270

AB A medicament comprising, sep. or together, (A) a compound of formula (I) in free or salt or solvate form, where W, Rx, Ry, R1, R2, R3, R4, R5, R6 and R7 have the meanings as indicated in the specification, and (B) one or more of compds. selected from the group consisting of A2A agonists, A2B antagonists, antihistamines, caspase inhibitors, ENaC inhibitors, LTB4 antagonists, LTD4 antagonists and serine protease inhibitors, for simultaneous, sequential or sep. administration in the treatment of an inflammatory or obstructive airways disease.

IT 312753-06-3

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(medicament containing organic compds. for therapy of inflammatory or obstructive airways diseases)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 52 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 145:495604 CA

TITLE: Combination of a HMG-CoA reductase inhibitor and a

drug intervening in the renin-angiotensin system for

treating respiratory disorders

INVENTOR(S): Lindmark, Bertil; Thoren, Anders; Higenbottam, Timothy

William

PATENT ASSIGNEE(S): Astrazeneca AB, Swed.; Astrazeneca UK Limited

SOURCE: PCT Int. Appl., 21pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PAT	PATENT NO.				KINI	)	DATE			APPL	ICAT	ION I	NO.		DATE			
						-												
WO 2006117534				A2		2006	1109		WO 2	006-	GB15	82		2	0060	428		
WO 2006117534				А3		2007	0125											
	W:	ΑE,	AG,	AL,	AM,	AT,	ΑU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,	

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.:

GB 2005-8924 A 20050430

AB The invention provides medicaments comprising a combination of a HMG-CoA reductase inhibitor and a drug intervening in the renin-angiotensin system selected from angiotensin II antagonists and angiotensin converting enzyme (ACE) inhibitors optionally in combination with a bronchodilator and a glucocorticosteroid in the treatment of respiratory disorders such as chronic obstructive pulmonary disease (COPD).

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(combination of a HMG-CoA reductase inhibitor and a drug intervening in the renin-angiotensin system for treating respiratory disorders)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 53 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 145:448369 CA

TITLE: Indacaterol(Novartis/SkyePharma)

AUTHOR(S): Currie, Graeme P.

CORPORATE SOURCE: Aberdeen Royal Infirmary, Aberdeen, AB25 2ZN, UK SOURCE: Current Opinion in Investigational Drugs (Thomson

Scientific) (2006), 7(5), 457-463

CODEN: COIDAZ; ISSN: 1472-4472

PUBLISHER: Thomson Scientific
DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. In collaboration with SkyePharma, Novartis is developing a multidose dry powder inhaler formulation of indacaterol, a long-acting  $\beta 2$  agonist and bronchodilator, for the potential treatment of asthma and chronic obstructive pulmonary disease. In Jan. 2006, Novartis expected phase III clin. trials to start in early 2006, with submission planned for 2007.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(multidose dry powder inhaler formulation of indacaterol, long-acting  $\beta 2$  adrenoceptor agonist and bronchodilator is currently being developed to treat asthma and chronic obstructive pulmonary disease patient)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 54 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 145:443938 CA

TITLE: Inhalation compositions containing anticholinergics

and 2-indanylaminoethylquinolinones.

INVENTOR(S): Bouyssou, Thierry; Konetzki, Ingo; Pieper, Michael P.;

Schnapp, Andreas

PATENT ASSIGNEE(S): Boehringer Ingelheim International GmbH, Germany

SOURCE: U.S. Pat. Appl. Publ., 20pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060239935	A1	20061026	US 2006-379713	20060421
PRIORITY APPLN. INFO.:			EP 2005-8957 A	20050423
OTHER SOURCE(S):	MARPAT	145:443938		

GΙ

HO HN R2 
$$\mathbb{R}^{1}$$

AB The present invention relates to new pharmaceutical compns. for inhalation containing one or more, preferably one anticholinergic in combination with one or more pharmacol. acceptable acid addition salts of I where R1-R4 may be H, alkyl, alkoxy, or alkoxyalkyl and their use in the treatment of respiratory complaints.

IT 312753-16-5D, derivs.

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (inhalation compns. containing anticholinergics and 2-indanylaminoethylquinolinones)

Ι

RN 312753-16-5 CA

CN 2(1H)-Quinolinone, 5-[2-[(2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

L8 ANSWER 55 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 145:432242 CA

TITLE: Treatment of connective tissue diseases of the skin

with  $\beta$ 2-adrenoceptor agonists

INVENTOR(S):
Weidner, Morten Sloth

PATENT ASSIGNEE(S): Astion Development A/S, Den.

SOURCE: PCT Int. Appl., 52pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

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WO 2006108424 A2
                                 20061019 WO 2006-DK50013
                                                                      20060412
     WO 2006108424
                         А3
                                 20061214
     WO 2006108424
                          A9
                                 20070809
             AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
         W:
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
             KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
             MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
             SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
             VN, YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
     AU 2006233502
                                 20061019 AU 2006-233502
                                                                      20060412
                          A1
     CA 2604758
                                 20061019
                                              CA 2006-2604758
                                                                      20060412
                           Α1
     US 20060235048
                          Α1
                                 20061019
                                              US 2006-402255
                                                                      20060412
     EP 1719507
                                              EP 2006-7632
                          Α1
                                 20061108
                                                                      20060412
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,
             BA, HR, IS, YU
     JP 2008535873
                           Τ
                                 20080904
                                              JP 2008-505738
                                                                       20060412
                          Α
     IN 2007DN07745
                                 20071109
                                              IN 2007-DN7745
                                                                      20071009
                         A 20080222
A 20080114
A 20080115
A 20080618
     MX 2007012794
                                              MX 2007-12794
                                                                      20071012
     NO 2007005527
                                              NO 2007-5527
                                                                      20071102
     KR 2008005957
                                              KR 2007-726406
                                                                      20071113
     CN 101203214
                                              CN 2006-80016534
                                                                      20071113
                                                                  A 20050413
PRIORITY APPLN. INFO.:
                                              DK 2005-529
                                              WO 2006-DK50013 W 20060412
                         MARPAT 145:432242
OTHER SOURCE(S):
     The present invention provides effective and safe medicaments for the
     treatment of connective tissue diseases of the skin, particularly with
     respect to the treatment of cutaneous forms of Lupus Erythematosus. The
     medicaments comprise as the therapeutically active ingredient a beta2
     adrenoceptor agonist. The invention furthermore relates to dermatol.
     compns. without skin sensitization properties and which contain
     enantiomerically pure or enriched R-enantiomers of a beta2 adrenoceptor
     agonist.
ΙT
     312753-06-3, Indacaterol
     RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (treatment of connective tissue diseases of skin with
        \beta2-adrenoceptor agonists)
RN
     312753-06-3 CA
     2(1H) -Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-(1H)-2]]
CN
     vl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)
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Absolute stereochemistry.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 56 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 145:404168 CA

TITLE: Medicaments and methods combining an anticholinergic,

a corticosteroid, and a long acting beta agonist

INVENTOR(S): Sequeira, Joel A.; Yang, Tsong-Toh

PATENT ASSIGNEE(S): Schering Corporation, USA SOURCE: PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

I	PATENT NO.				KIND DATE			APPLICATION NO.						DATE				
		2006				A2				;	WO 2	006-1	JS11	924		2	0060	330
		W:	AE,	AG,	AL,	AM,	AT,	ΑU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
								DE,										
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		RW.			•	,		CZ,	DE.	DK.	EE.	ES.	FT.	FR.	GB.	GR.	HII.	TE.
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	JP 2008534611						2008				008-					0060.		
						А		20071121		MX 2007-12084								
PRIOR:	CORITY APPLN. INFO.:									005- 005-		-		P 2 P 2	0050. 0051			

US 2006-786960P P 20060329 WO 2006-US11924 W 20060330

AB Disclosed are inhalable medicaments and methods based on an anticholinergic in combination with a corticosteroid, and a long acting beta agonist, for simultaneous or sequential administration in the prevention or treatment of a respiratory, inflammatory or obstructive airway disease. In addition, disclosed are inhalable medicaments and methods based on combinations of an anticholinergic and a corticosteroid; an anticholinergic and a long acting beta agonist; or a corticosteroid and a long acting beta agonist, for simultaneous or sequential administration in the prevention or treatment of a respiratory, inflammatory or obstructive airway disease. Also disclosed are inhalable medicaments and methods comprising a phosphodiesterase IV inhibitor for administration in the prevention or treatment of a respiratory, inflammatory or obstructive airway disease.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(medicaments combining anticholinergic, corticosteroid, and long-acting  $\beta\text{-agonist})$ 

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 57 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 145:368973 CA

TITLE: Indacaterol: asthma therapy treatment of COPD

eta2-adrenoceptor agonist

AUTHOR(S): Davies, S. L.; Castaner, J.

CORPORATE SOURCE: Prous Science, Barcelona, 08080, Spain

SOURCE: Drugs of the Future (2005), 30(12), 1219-1224

CODEN: DRFUD4; ISSN: 0377-8282

PUBLISHER: Prous Science

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. The chronic inflammatory syndromes asthma and chronic obstructive pulmonary disease (COPD) are significant causes of morbidity, mortality, increased healthcare costs and hospital admissions.  $\beta 2$ -Adrenoceptor agonists are among the first-line therapies for

asthma and COPD due to their bronchodilating effects, but currently available therapeutics are associated with a short duration of action and a broad side effect profile. Indacaterol (QAB-149) is currently undergoing phase II development for the treatment of asthma and COPD. Clin. studies have demonstrated that it is well tolerated and associated with improved cardiovascular safety in both patient populations. Furthermore, it is the first  $\beta$ 2-adrenoceptor agonist to provide rapid improvements in bronchodilatory control and FEV1, with a sustained (24 h) duration of action. Indacaterol could therefore provide substantial improvement in the life-threatening symptoms of breathlessness and bronchoconstriction associated with asthma and COPD.

ΙT 312753-06-3P

> RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(QAB-149 rapidly improved bronchodilatory control, FEV1 with sustained duration of action showing it can provide improvement in life-threatening symptoms of breathlessness and bronchoconstriction associated with asthma, COPD in patient)

RN 312753-06-3 CA

2(1H) - Quinolinone, 5 - [(1R) - 2 - [(5, 6 - diethyl - 2, 3 - dihydro - 1H - inden - 2 - dihydro - 2 - dihyCN v1)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 58 OF 76 CA COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 144:444937 CA

TITLE: In vitro and in vivo pharmacological characterization of 5-[(R)-2-(5,6-diethyl-indan-2-ylamino)-1-hydroxy-

ethyl]-8-hydroxy-1H-quinolin-2-one (indacaterol), a novel inhaled  $\beta^2$  adrenoceptor agonist with a 24-h

duration of action

Battram, Cliff; Charlton, Steven J.; Cuenoud, Bernard; AUTHOR(S):

> Dowling, Mark R.; Fairhurst, Robin A.; Farr, David; Fozard, John R.; Leighton-Davies, Juliet R.; Lewis, Christine A.; McEvoy, Lorraine; Turner, Robert J.;

Trifilieff, Alexandre

CORPORATE SOURCE: Novartis Institutes for BioMedical Research, Horsham,

UK

SOURCE: Journal of Pharmacology and Experimental Therapeutics

(2006), 317(2), 762-770

CODEN: JPETAB; ISSN: 0022-3565

PUBLISHER: American Society for Pharmacology and Experimental

Therapeutics

DOCUMENT TYPE: Journal LANGUAGE: English

Here, we describe the preclin. pharmacol. profile of indacaterol, a novel, chirally pure inhaled  $\beta$ 2 adrenoceptor agonist, in comparison with marketed drugs. Indacaterol is close to a full agonist at the human  $\beta$ 2 adrenoceptor (Emax = 73±1% of the maximal effect of isoprenaline;  $pEC50 = 8.06\pm0.02$ ), whereas salmeterol displays only partial efficacy (38±1%). The functional selectivity profile of indacaterol over  $\beta \mathbf{1}$  human adrenoceptors is similar to that of formoterol, whereas its  $\beta$ 3 adrenoceptor selectivity profile is similar to that of formoterol and salbutamol. In isolated superfused guinea pig trachea, indacaterol has a fast onset of action ( $30\pm4$  min) similar to formoterol and salbutamol, and a long duration of action (529±99 min) comparable with salmeterol. In the conscious guinea pig, when given intratracheally as a dry powder, indacaterol inhibits 5-hydroxytryptamine-induced bronchoconstriction for at least 24 h, whereas salmeterol, formoterol, and salbutamol have durations of action of 12, 4, and 2 h, resp. When given via nebulization to anesthetized rhesus monkeys, all of the compds. dose-dependently inhibit methacholine-induced bronchoconstriction, although indacaterol produces the most prolonged bronchoprotective effect and induces the lowest increase in heart rate for a similar degree of antibronchoconstrictor activity. In conclusion, the preclin. profile of indacaterol suggests that this compound has a superior duration of action compatible with once-daily dosing in human, together with a fast onset of action and an improved cardiovascular safety profile over marketed inhaled  $\beta2$  adrenoceptor agonists.

IT 312753-06-3, Indacaterol

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(in vitro and in vivo pharmacol. characterization of indacaterol, a novel inhaled  $\beta 2$  adrenoceptor agonist with a 24-h duration of action)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 59 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 144:239931 CA

TITLE: Pharmaceutical compositions for the treatment of

respiratory and gastrointestinal disorders

INVENTOR(S):
Jung, Birgit; Himmelsbach, Frank

PATENT ASSIGNEE(S): Boehringer Ingelheim International GmbH, Germany;

Boehringer Ingelheim Pharma Gmbh & Co. KG

SOURCE: PCT Int. Appl., 321 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA:	PATENT NO.				KIND DATE			APPLICATION NO.						DATE			
	2006 2006						2006 2007			WO 2	005-	EP83	85		2	0050	803
		AE, CN, GE, LC, NG,	AG, CO, GH, LK, NI,	AL, CR, GM, LR, NO,	AM, CU, HR, LS, NZ,	AT, CZ, HU, LT, OM,	AU, DE, ID, LU, PG, TN,	AZ, DK, IL, LV, PH,	DM, IN, MA, PL,	DZ, IS, MD, PT,	EC, JP, MG, RO,	EE, KE, MK, RU,	EG, KG, MN, SC,	ES, KM, MW, SD,	FI, KP, MX, SE,	GB, KR, MZ, SG,	GD, KZ, NA, SK,
	RW:	ZA, AT, IS, CF,	ZM, BE, IT, CG,	ZW BG, LT, CI,	CH, LU, CM,	CY, LV, GA,	CZ, MC, GN, NA,	DE, NL, GQ,	DK, PL, GW,	EE, PT, ML,	ES, RO, MR,	FI, SE, NE,	FR, SI, SN,	GB, SK, TD,	GR, TR, TG,	HU, BF, BW,	IE, BJ, GH,
CA	2006 2575 1784	0035 541	893		A1 A1		TM, 2006 2006 2007	0216 0216		US 2 CA 2	005- 005-	2575	541		2	0050 0050 0050	803
21		AT, IS,	BE,	BG, LI,	CH, LT,	CY,	CZ, LV,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,	ΙE,
US	JP 2008509177 US 20090017036 ORITY APPLN. INFO.:				T 20080327 A1 20090115				JP 2007-525227 US 2008-202784 EP 2004-18808 US 2005-189643				20080902 A 20040807 A1 20050726				
אים משעיים כי	D COUDCE (C).					маррат 177.2200				WO Z	005	rc02	00	W 20050803			

OTHER SOURCE(S): MARPAT 144:239931

AB The present invention relates to novel pharmaceutical compns. comprising at least 1 EGFR kinase inhibitor and at least one addnl. active compound selected from  $\beta\text{--}2$  mimetics, steroids, PDE-IV inhibitors, p38 MAP kinase inhibitors, NK1 antagonists and endothelin-antagonists, processes for preparing the compns. and the use thereof as drugs in the treatment of respiratory or gastrointestinal complaints, as well as inflammatory diseases of the joints, the skin or the eyes. Thus, an inhalable powder contained an EGFR kinase inhibitor 150, formoterol fumarate dihydrate 50, and lactose 12,300 mg/capsule.

IT 312753-33-6

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(pharmaceutical compns. for treatment of respiratory and gastrointestinal disorders)

RN 312753-33-6 CA

CN 2(1H)-Quinolinone, 5-[2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

L8 ANSWER 60 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 144:239926 CA

TITLE: Inhalable medicaments containing a new

anticholinergic, corticosteroids, and betamimetics

INVENTOR(S):
Pieper, Michael P.; Pairet, Michel

PATENT ASSIGNEE(S): Boehringer Ingelheim International GmbH, Germany

SOURCE: U.S. Pat. Appl. Publ., 15 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

	PATENT NO.				KIND		DATE			APPL	ICAT	ION :	NO.		D.	ATE		
		2006						2006	0216		 US 2	 005-	 1823	82		2	0050	715
	DΕ	1020	0403	8886		A1		2006	0223		DE 2	004-	1020	0403	8886	2	0040	810
	DE	1020	0405	3023		A1		2006	0504		DE 2	004-	1020	0405	3023	2	0041	103
	CA	2573	370			A1		2006	0223		CA 2	005-	2573	370		2	0050	804
	WO	2006	0183	91		A1		2006	0223		WO 2	005-	EP53	840		2	0050	804
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			GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KM,	KP,	KR,	KZ,
			LC,	LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,
								PG,										
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						RU,				,	,	,	,	,	,	,	,	,
	EP	1778	,	,	,	,	,	2007	0502		EP 2	005-	7719	86		2.	0050	804
				BE.	BG.			CZ,										
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	IS, IT, LI JP 2008509196							,										8 N 4
DD T ()	ORITY APPLN. INFO.:							2000	0527	DE 2004-102004038886								
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AB A pharmaceutical formulation comprising: (a) at least one anticholinergic (I, wherein X- is an anion with a single neg. charge); (b) at least one corticosteroid (2); and (c) at least one betamimetic (3), and the enantiomers, mixts. of the enantiomers, racemates, solvates, hydrates, or physiol. acceptable acid addition salts thereof, processes for preparing them and their use in the treatment of respiratory diseases. An inhalable aerosol composition contained I (X = Br), budesonide, formoterol fumarate dihydrate, soya lecithin, and TG134a/TG227 (propellant).

IT 312753-33-6

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (inhalable medicaments containing an anticholinergic, corticosteroid, and betamimetic)

RN 312753-33-6 CA

CN 2(1H)-Quinolinone, 5-[2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

L8 ANSWER 61 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 144:156734 CA

TITLE: Salts of basic drugs with acidic polymeric sugars for

inhalant formulations

INVENTOR(S): Anson, Michael Simon; Crookes, Derek Leslie; Trivedi,

Harish Shivprasad

PATENT ASSIGNEE(S): Glaxo Group Limited, UK SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA'	PATENT NO.				KIND DATE			APPLICATION NO.						DATE			
_	2006 2006		_		A2 A3		2006 2006		1	WO 2	005-	EP79	91		2	0050	720
WO		AE, CN, GE, LC, NG,	AG, CO, GH, LK, NI,	CR, GM, LR, NO,	AM, CU, HR, LS, NZ,	AT, CZ, HU, LT, OM,	AU, DE, ID, LU, PG, TN,	AZ, DK, IL, LV, PH,	DM, IN, MA, PL,	DZ, IS, MD, PT,	EC, JP, MG, RO,	EE, KE, MK, RU,	EG, KG, MN, SC,	ES, KM, MW, SD,	FI, KP, MX, SE,	GB, KR, MZ, SG,	GD, KZ, NA, SK,
	R₩:	AT, IS, CF, GM,	IT, CG, KE,	BG, LT, CI, LS,	LU, CM,	LV, GA, MZ,	CZ, MC, GN, NA, TM	NL, GQ,	PL, GW,	PT, ML,	RO, MR,	SE, NE,	SI, SN,	SK, TD,	TR, TG,	BF, BW,	BJ, GH,
PRIORIT	RIORITY APPLN. INFO.:								(	GB 2	004-	1639	7	Ž	A 2	0040	722

OTHER SOURCE(S): MARPAT 144:156734

The present invention relates to salts of biodegradable polymeric sugars comprising acidic groups and a pharmaceutically active agent comprising one or more basic groups, i.e.,  $\beta$ 2-adrenoceptor agonists, anti-inflammatory agents, anticholinergics, anti-infective agents and antihistamines, and to pharmaceutical formulations of said salts adapted for administration by inhalation. For example, salmeterol hyaluronate was prepared by reacting salmeterol free base (317.5 g) dissolved in IMS with hyaluronic acid (125.19 g) at  $30^{\circ}$  for 18 h give 189.9 g of polymeric salt. A dry powder was prepared by blending micronized salmeterol hyaluronate (particle size 5 µm) with lactose monohydrate (0.294% salmeterol hyaluronate, 99.706 lactose monohydrate). The salmeterol hyaluronate/lactose monohydrate blend was stable with no apparent agglomeration after 1 mo storage at  $40^{\circ}/75\%$  relative humidity. Salmeterol xinafoate/lactose blend (used for comparison) after storage at  $40^{\circ}/75\%$  relative humidity was highly agglomerated and could not be tested.

IT 312753-06-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(prepns. and stability of salts of basic drugs with acidic polymeric sugars for inhalant formulations)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 62 OF 76 CA COPYRIGHT 2009 ACS on STN

144:88180 CA ACCESSION NUMBER:

TITLE: Method for preparing 8-substituted

oxy-5-((R)-2-halo-1-hydroxy-ethyl)-(1

H)-quinolin-2-ones employing a chiral reduction step

INVENTOR(S): Lohse, Olivier; Vogel, Caspar; Abel, Stephan PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis Pharma GmbH

SOURCE: PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005123684 WO 2005123684	A2		WO 2005-EP6686	20050621
W: AE, AG, CN, CO, GE, GH, LC, LK, NG, NI, SL, SM, ZA, ZM, RW: BW, GH, AZ, BY,	AL, AM, AT CR, CU, CZ GM, HR, HU LR, LS, LT NO, NZ, OM SY, TJ, TM ZW GM, KE, LS KG, KZ, MD	AU, AZ, DE, DK, I, ID, IL, I, LU, LV, I, PG, PH, I, TN, TR, MW, MZ, P, RU, TJ,	BA, BB, BG, BR, BW, DM, DZ, EC, EE, EG, IN, IS, JP, KE, KG, MA, MD, MG, MK, MN, PL, PT, RO, RU, SC, TT, TZ, UA, UG, US, NA, SD, SL, SZ, TZ, TM, AT, BE, BG, CH, IE, IS, IT, LT, LU,	ES, FI, GB, GD, KM, KP, KR, KZ, MW, MX, MZ, NA, SD, SE, SG, SK, UZ, VC, VN, YU, UG, ZM, ZW, AM, CY, CZ, DE, DK,
RO, SE,		R, BF, BJ,	CF, CG, CI, CM, GA,	
AU 2005254698			AU 2005-254698	20050621
		20080925		00050604
		20051229	CA 2005-2566388	
CN 1968927 EP 1791820	A A2		CN 2005-80019589 EP 2005-770221	
			DK, EE, ES, FI, FR,	
	LI, LT, LU		PL, PT, RO, SE, SI,	

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JP 2008503526 T 20080207 JP 2007-517180
BR 2005012298 A 20080325 BR 2005-12298
IN 2006DN06563 A 20070831 IN 2006-DN6563
ZA 2006009257 A 20080730 ZA 2006-9257
MX 2006014695 A 20070212 MX 2006-14695
KR 2007029752 A 20070314 KR 2006-726958
NO 2007000400 A 20070321 NO 2007-400
                                                                                                                20050621
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                                                                                                                20061214
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                                                                                                                20070122
        US 20090054653
                                        A1 20090226
                                                                         US 2008-569140
                                                                                                                20080813
                                                                         GB 2004-13960 A 20040622
WO 2005-EP6686 W 20050621
PRIORITY APPLN. INFO.:
OTHER SOURCE(S): CASREACT 144:88180; MARPAT 144:88180
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R^1 \\
SO2 \\
X \\
N
\end{array}$$

$$\begin{array}{c}
K^2 \\
K^2 \\
K^2 \\
K^3
\end{array}$$

$$\begin{array}{c}
K^2 \\
K^3
\end{array}$$

AΒ A process for preparing 8-substituted oxy-5-((R)-2-halo-1-hydroxy-ethyl)-(1 H)-quinolin-2-ones or acceptable solvates thereof which are useful intermediates from which to prepare 5-[(R)-2-(5,6-diethylindan-2-ylamino)-1hydroxyethyl]-8-hydroxy-(1H)-quinolin-2-one salts. The process involves reacting a  $5-(\alpha-\text{haloacetyl})-8-\text{substituted oxy-(1H)-quinolin-2-one}$ with a reducing agent in the presence of a chiral agent and a base to form a 8-(substituted oxy)-5-((R)-2-halo-1-hydroxy-ethyl)-(1H)-quinolin-2-one, said chiral agent having a formula I [wherein M = Ru, Rh, Ir, Fe, Co, or Ni; L = aryl or arylalkyl; X = H or halo; R1 = alkyl, cycloalkyl, aryl, etc.; R2 and R3 = Ph or together form a cyclohexane or cyclopentane ring; Z = bond or 1,1'-ferrocenediyl].

ΙT 435273-74-8P

> RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(method for producing and manufacturing 8-substituted oxy-5-((R)-2-halo-1-hydroxy-ethyl)-(1 H)-quinolin-2-ones employing a chiral reducing agent for ketone reduction step)

RN 435273-74-8 CA

2(1H) -Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-CN yl)amino]-1-hydroxyethyl]-8-hydroxy-, (2Z)-2-butenedioate (1:?) (CA INDEX NAME)

CM 1

CRN 312753-06-3 CMF C24 H28 N2 O3

Absolute stereochemistry.

CM 2

CRN 110-16-7 CMF C4 H4 O4

Double bond geometry as shown.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 63 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 144:27574 CA

TITLE: Combinations comprising antimuscarinic agents and

 $\beta$ -adrenergic agonists

INVENTOR(S): Gras Escardo, Jordi; Calvo, Jesus Llenas; Ryder,

Hamish; Orviz Diaz, Pio

PATENT ASSIGNEE(S): Spain

SOURCE: U.S. Pat. Appl. Publ., 19 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050267078	A1	20051201	US 2005-141428	20050531
ES 2257152	A1	20060716	ES 2004-1312	20040531
ES 2257152	B1	20070701		
IT 2005MI1021	A1	20050831	IT 2005-MI1021	20050531
IE 2005000366	A1	20051130	IE 2005-366	20050531
US 20050267135	A1	20051201	US 2005-141169	20050531
NL 1029151	A1	20051205	NL 2005-1029151	20050531
NL 1029151	C2	20060622		

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US 20050288266
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EP 1763369
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AB Con	mbinations compris	ing (a)	a β2-agoni				

AB Combinations comprising (a) a  $\beta$ 2-agonist and (b) an antagonist of M3 muscarinic receptors which is 3(R)-(2-hydroxy-2,2-dithien-2-ylacetoxy)-1-(3-phenoxypropyl)-1-azoniabicyclo[2.2.2]octane, in the form of a salt having an anion X, which is a pharmaceutically acceptable anion of a mono or polyvalent acid are useful, e.g., for the treatment of respiratory disease, e.g., asthma or chronic obstructive pulmonary disease.

IT 312753-06-3

RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical

process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(antiasthmatic combinations comprising antimuscarinic agents and  $\beta\text{--adrenergic}$  agonists)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 64 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 144:17179 CA

TITLE: Muscarinic M3 antagonist combination with

 $\beta\text{--adrenergic agonists,}$  and use for treatment of

respiratory conditions

INVENTOR(S): Gras Escardo, Jordi; Llenas Calvo, Jesus; Ryder,

Hamish; Orviz Diaz, Pio

PATENT ASSIGNEE(S): Almirall Prodesfarma S. A., Spain

SOURCE: Fr. Demande, 45 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent LANGUAGE: French

FAMILY ACC. NUM. COUNT: 5

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OTHER SOURCE(S):
                       MARPAT 144:17179
    The invention discloses a combination, a product, a kit of parts, and a
    packaging including (a) a \beta2-agonist and (b) a muscarinic M3 receptor
    antagonist [e.g. 3(R)-(2-hydroxy-2,2-dithien-2-ylacetoxy)-1-(3-
    phenoxypropyl)-1-azoniabicyclo[2.2.2]-octane], in the form of a salt
    having an anion X which is a pharmaceutically acceptable anion of a mono-
    or polyfunctional acid, their use and a process of treatment of a patient
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ΙT
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    RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (muscarinic M3 antagonist combination with \beta-adrenergic agonists
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yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 65 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 144:11584 CA

TITLE: Combinations of glycopyrrolate and  $\beta\text{--}2$ 

adrenoceptor agonists in the treatment of an inflammatory or obstructive airways disease Collingwood, Stephen Paul Novartis AG, Switz.; Novartis Pharma GmbH

INVENTOR(S):

PATENT ASSIGNEE(S):

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent English LANGUAGE:

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AU 2005	24443	39		A1		2005	1124		AU 2	005-	2444.	39		2	0050	517
CA 2563	302			A1		2005	1124	1	CA 2	005-	2563.	302		2	0050	517
EP 1755	590			A1		2007	0228		EP 2	005-	7496.	35		2	0050	517
R:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,	IE,
	IS,	IT,	LI,	LT,	LU,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR		
CN 1953	745			А		2007	0425		CN 2	005-	8001	5932		2	0050	517
BR 2005011327			Α					BR 2	005-	1132	7					
				Τ				7 JP 2007-517074						20050517		

ZA 2006008123	A	20080730	ZA	2006-8123		20060929
KR 2007011519	A	20070124	KR	2006-724115		20061117
MX 2006013382	A	20070323	MX	2006-13382		20061117
IN 2006CN04247	A	20070706	IN	2006-CN4247		20061117
NO 2006005787	A	20061214	ИО	2006-5787		20061214
US 20080267886	A1	20081030	US	2008-568559		20080707
PRIORITY APPLN. INFO.:			GB	2004-11056	A	20040518
			WO	2005-EP5354	W	20050517

OTHER SOURCE(S): MARPAT 144:11584

AB A medicament comprises, sep. or together (A) glycopyrrolate; and (B) and a  $\beta\text{--}2$  adrenoceptor agonist for simultaneous, sequential or sep. administration in the treatment of an inflammatory or obstructive airways disease. Pharmaceutical compns. such dry powder inhalers that contain glycopyrrolate and maleate are described.

IT 753498-25-8

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (combinations of glycopyrrolate and  $\beta$ -2 adrenoceptor agonists in the treatment of an inflammatory or obstructive airways disease)

RN 753498-25-8 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy-, (2Z)-2-butenedioate (1:1) (CA INDEX NAME)

CM 1

CRN 312753-06-3 CMF C24 H28 N2 O3

Absolute stereochemistry.

CM 2

CRN 110-16-7 CMF C4 H4 O4

Double bond geometry as shown.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 66 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 142:225794 CA

TITLE: Medicaments for inhalation comprising betamimetics and

an anticholinergic agent

Germeyer, Sabine; Meade, Christopher John Montague; INVENTOR(S):

Meissner, Helmut; Morschhaeuser, Gerd; Pairet, Michel;

Pestel, Sabine; Pieper, Michael P.; Pohl, Gerald; Reichl, Richard; Speck, Georg; Konetzki, Ingo

Boehringer Ingelheim International G.m.b.H., Germany; PATENT ASSIGNEE(S):

Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G.

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

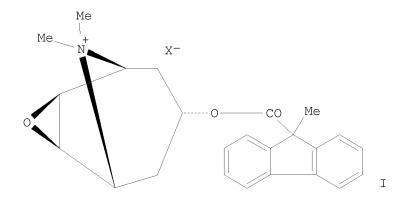
DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PAT		KIND DATE				APPLICATION NO.						DATE					
WO	2005	0139	92		A1 20050217			WO 2004-EP7997						20040717			
	W:	ΑE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	, BG,	BR,	BW,	BY,	BZ,	CA,	CH,
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		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	, JP,	KE,	KG,	KP,	KR,	KΖ,	LC,
		LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	, MK,	MN,	MW,	MX,	MZ,	NA,	NI,
		NO,	NΖ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	, SC,	SD,	SE,	SG,	SK,	SL,	SY,
		ΤJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	, UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW
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		ΑZ,	BY,	KG,	KΖ,	MD,	RU,	ΤJ,	TM,	AT,	, BE,	BG,	CH,	CY,	CZ,	DE,	DK,
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US	2005										2004-		-			0040	715
CA	2533	791			A1		2005	0217	1	CA 2	2004-:	2533	791		2	0040	717
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EP	1651	221			В1		2009	0114									
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ORIT	ORITY APPLN. INFO.:										2003-					0030	
											2003-					0031	
										WO 2	2004-1	EP79	97	١	W 2	0040	717
HER SO	ER SOURCE(S):					MARPAT 142:22579											

GΙ



AB The present invention relates to novel pharmaceutical compns. based on beta2 agonists and salts of a new anticholinergic, processes for preparing them and their use in the treatment of respiratory complaints, wherein the anticholinergic agent has the formula I. Scopine 9-methyl-fluorene-9-carboxylate methobromide (II) was prepared by the reaction of scopine 9-methyl-fluorene-9-carboxylate with 50% Me bromide solution in acetonitrile. The crystals precipitated were separated off and recrystd.

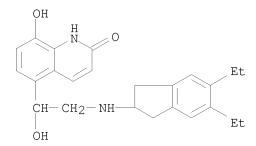
from di-Et ether to purify them, yield = 70%, m.p. =  $214^{\circ}$ . Inhalant powders contained II 50, fomoterol fumarate dihydrate 12, and lactose 12408  $\mu q$  per capsule.

IT 312753-33-6

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (medicaments for inhalation comprising betamimetics and anticholinergic agent)

RN 312753-33-6 CA

CN 2(1H)-Quinolinone, 5-[2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 67 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 142:183470 CA

TITLE: Medicaments for inhalation comprising an

anticholinergic and a betamimetic

INVENTOR(S): Meade, Christopher John Montague; Pairet, Michel;

Pieper, Michael P.

PATENT ASSIGNEE(S): Boehringer Ingelheim International G.m.b.H., Germany

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SOURCE: U.S. Pat. Appl. Publ., 15 pp.
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CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

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APPLICATION NO.
      PATENT NO.
                            KIND DATE
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                             A1 20050203 US 2004-891552 20040715
A1 20050217 AU 2004-262902 20040717
      US 20050026948
      AU 2004262902
      CA 2534132 A1 20050217 CA 2004-2534132 20040717 WO 2005014044 A1 20050217 WO 2004-EP8030 20040717
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                GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
                LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
                NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
          TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

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B1 20070321
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                     A 20060906 CN 2004-80022092

A 20061003 BR 2004-13129

T 20070111 JP 2006-521461

T 20070415 AT 2004-741130

A2 20070704 EP 2006-122278
                                                                                  20040717
      CN 1829534
      BR 2004013129
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      EP 1803469
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           R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
      ES 2284025
                    T3 20071101 ES 2004-741130
                                                                                 20040717
                              A 20060424 MX 2006-1047
A 20060519 KR 2006-701861
      MX 2006001047
                                                                                 20060126
                                                     KR 2006-701861 20060126
EP 2003-17163 A 20030729
US 2003-507982P P 20031002
EP 2004-741130 A3 20040717
WO 2004-EP8030 W 20040717
      KR 2006052911
PRIORITY APPLN. INFO.:
                             MARPAT 142:183470
OTHER SOURCE(S):
AΒ
      Disclosed is a pharmaceutical composition comprising
      3-[(hydroxydi-2-thienylacetyl)oxy]-1-(3-phenoxypropyl)-1-
      azoniabicyclo[2.2.2]octane salts with a single neg. charge, and a
      betamimetic, optionally together with a pharmaceutically acceptable
      excipient, for the treatment of respiratory tract diseases. For example,
      inhalable powders in a capsule contained
      3-[(hydroxydi-2-thienylacetyl)oxy]-1-(3-phenoxypropyl)-1-
      azoniabicyclo[2.2.2]octane bromide 150, formoterol fumarate dihydrate 50,
      and lactose 12,300 \mug.
      312753-33-6
ΙT
      RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (medicaments for inhalation comprising anticholinergics and
         betamimetics)
RN
      312753-33-6 CA
```

CN 2(1H)-Quinolinone, 5-[2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

L8 ANSWER 68 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 141:350042 CA

TITLE: Preparation of quinoline-2-one derivatives for the

treatment of airways diseases

INVENTOR(S): Fairhurst, Robin Alec; Sandham, David Andrew; Beattie,

David; Bruce, Ian; Cuenoud, Bernard; Madden, Reamonn;

Press, Neil John; Taylor, Roger John; Turner,

Katharine Louise; Watson, Simon James

Novartis Ag, Switz.; Novartis Pharma GmbH

SOURCE: PCT Int. Appl., 87 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT ASSIGNEE(S):

PA.	TENT	NO.			KIND DATE APPLICATION NO.						DATE							
WO	2004	0871	 42		A1		2004	1014	WO 2004-EP3516						20040402			
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		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KΕ,	KG,	KΡ,	KR,	KΖ,	LC,	
		LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NΙ,	
							PL,											
		ТJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UΖ,	VC,	VN,	YU,	ZA,	ZM,	ZW	
	RW:	BW,	GH,	GM,	KΕ,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	ΑM,	AΖ,	
			•		•	•	ΤJ,	•			•	•						
		•				•	HU,		•	•				•	•	•	•	
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		TD,																
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EP	1613				A1		2006			EP 2	004-	7253	60		2	0040	402	
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ES 2320994	Т3	20090601	ES	2004-725360		20040402
MX 2005010712	A	20051215	MX	2005-10712		20051004
IN 2005CN02529	A	20070914	IN	2005-CN2529		20051004
US 20070066607	A1	20070322	US	2006-552023		20060727
PRIORITY APPLN. INFO.:			GB	2003-7856	A	20030404
			GB	2003-11462	A	20030519
			GB	2003-13489	A	20030611
			GB	2003-16656	А	20030716
			GB	2003-16657	A	20030716
			WO	2004-EP3516	W	20040402

OTHER SOURCE(S): GI

MARPAT 141:350042

AB Title compds. represented by the formula I [wherein C-Y = CH2CH2, CH:CH, CH2O; R1, R2 = H, OH and R1  $\neq$  R2; G = (un)substituted cyclopentyl(alkyl), indanyl(alkyl), benzofuranyl(alkyl), etc.; in free or salt or solvate form] were prepared For example, reaction of (R)-1-aminoindane with (R)-8-benzyloxy-5-oxiranyl-1H-quinolin-2-one, followed by hydrogenation, gave II. I and their pharmaceutical compns. are useful for the treatment of a condition which is prevented or alleviated by activation of the  $\beta$ 2-adrenoreceptor, or the treatment of an obstructive or inflammatory airways disease (no data). IT 1055985-89-1

RL: PRPH (Prophetic)

(Preparation of quinoline-2-one derivatives for the treatment of airways diseases)

RN 1055985-89-1 CA

CN 2(1H)-Quinolinone, 5-[2-[(5,6-diethyl-2,3-dihydro-1,3-dimethyl-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

REFERENCE COUNT:

16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS

## RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 69 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 141:350030 CA

TITLE: Preparation of (diphenyl) (pyrrolidinyl) methyl amides

as  $\beta$ 2 adrenergic receptor agonist and muscarinic

receptor antagonist

INVENTOR(S): Mammen, Mathai; Hughes, Adam

PATENT ASSIGNEE(S): Theravance, Inc., USA SOURCE: PCT Int. Appl., 175 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

					KIND DATE				APPLICATION NO.									
WO	O 2004089892				A2 20								20040331					
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											•	, SD,						
												, VC,						
	RW:											, TZ,						
											•	, СН,						
		ES,	FΙ,	FR,	GB,	GR,	HU,	ΙE,	ΙΤ,	LU	, MC	, NL,	PL,	PT,	RO,	SE,	SI,	
		SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ	, GN	, GQ,	GW,	ML,	MR,	ΝE,	SN,	
		TD,	ΤG															
EP	1615	881			A2		2006	0118		EΡ	2004	-7586	42		2	0040	331	
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JP	2006	5221.	34		T		2006	0928		JΡ	2006	-5095	09		2	0040	331	
US	2006	0287	369		A1		2006	1221		US	2004	-8137	45		2	0040	331	
US	7317	102			В2		2008	0108										
US	2008	0114	030		A1		2008	0515		US	2007	-9839	63		2	0071	113	
	US 20080114030 ORITY APPLN. INFO.:						_ , ,					-4592				0030	401	
	JILLI MILLIN. INI O			• •								-8137						
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JEB SO	R SOURCE(S).				MZDI	DZT	141.	3500			2001	0.000			2	0010	J J I	

OTHER SOURCE(S): MARPAT 141:350030

GI

$$R^{1}m-Ar^{1}$$
 E

 $R^{2}n-Ar^{2}$ 
 $R^{3}p$ 
 $R^{4}$ 
 $R^{5}$ 
 $R^{7}$ 
 $R^{6}$ 
 $R^{6}$ 

AΒ Title compds. represented by the formula I [wherein Ar1, Ar2 = independently Ph, (cyclo)alkyl, (un)substituted heteroaryl, heterocyclyl; m = 0-3; n = 0-3; R1-R3 = independently (cyclo)alkyl, alkenyl, alkynyl,cyano, etc.; E = CN, OH, carbonylamino, carboxylate; p = 0-4; R4 = adivalent; R5 = H or alkyl; R6 = carbamoyl or alkoxyalkyl; R7 = H or R6R7 = (un) substituted (hetero) cyclyl; q = 1-2; and pharmaceutically acceptable salts, solvates or stereoisomers thereof] were prepared as  $\beta$ 2 adrenergic receptor agonist and muscarinic receptor antagonist. For example, II was given in a multi-step synthesis starting from the reaction of (S)-1-benzyl-3-pyrrolidinol with p-toluenesulfonyl chloride. II was tested for radioligand binding at human  $\beta$ 1,  $\beta$ 2 and  $\beta$ 3 adrenergic receptors with a ration of  $Ki(\beta 1)/Ki(\beta 2)$  greater than 8, and with Ki values of less than 50 nM at human muscarinic receptors, etc. Thus, I and their pharmaceutical compns. are useful as  $\beta 2$ adrenergic receptor agonist and muscarinic receptor antagonist for the treatment of pulmonary disorders, such as chronic obstructive pulmonary disease and asthma.

ΙI

IT 777064-28-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of (diphenyl)(pyrrolidinyl)methyl amides as  $\beta 2$  adrenergic receptor agonist and muscarinic receptor antagonist)

RN 777064-28-5 CA

CN 3-Pyrrolidineacetamide,  $1-[2-[[[(1R,3S)-3-[[2-(1,2-dihydro-8-hydroxy-2-oxo-5-quinolinyl)-2-hydroxyethyl]amino]cyclopentyl]carbonyl]amino]ethyl]- <math>\alpha, \alpha$ -diphenyl-, rel- (CA INDEX NAME)

Relative stereochemistry.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 70 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 141:332069 CA

TITLE: Process for preparation of

5-(haloacetyl)-8-hydroxy-(1H)-quinolin-2-one

derivatives

INVENTOR(S): Lohse, Olivier; Penn, Gerhard; Schilling, Hanspeter

PATENT ASSIGNEE(S): Novartis Ag, Switz.; Novartis Pharma GmbH

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PA:	ΓENT	NO.			KIN	KIND DATE			APPLICATION NO.						DATE				
WO	2004	0876	 68		A1	_	2004	1014		WO 2004-EP3479						20040401			
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							ΤJ,												
							HU, CG,												
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EP	1613	599			A1		2006	0111		EP 2	004-	7250.	35		20040401				
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	1774						2006												
	2006															0040			
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	2339															0040			
	2005						2006									0050			
ΤN	2005	CN02	4/4		A		2007	0831		IN 2	005-0	CN24	/4		2	0050	930		

NO 2005005099	A	20060102	NO	2005-5099		20051101
US 20060189653	A1	20060824	US	2005-550621		20051103
IN 2008CN04678	A	20090313	ΙN	2008-CN4678		20080904
PRIORITY APPLN. INFO.:			US	2003-459724P	P	20030402
			WO	2004-EP3479	W	20040401
			ΙN	2005-CN2474	АЗ	20050930

OTHER SOURCE(S): MARPAT 141:332069

This invention pertains to a method for producing  $5-(\alpha-\text{haloacetyl})-8-\text{hydroxy-(1H)-quinolin-2-one derivs.}$  The process involves (i) reacting 8-hydroxy-(1H)-quinolin-2-one with an acylating agent and a Lewis acid to form 5-acetyl-8-hydroxy-(1H)-quinolin-2-one; (ii) reacting 5-acetyl-8-hydroxy-(1H)-quinolin-2-one with a compound RL [wherein R is a protecting group and L is a leaving group] in the presence of a base to form 5-acetyl-8-(substituted oxy)-(1H)-quinolin-2-one; and (iii) reacting 5-acetyl-8-(substituted oxy)-(1H)-quinolin-2-one with a halogenating agent to form 5-( $\alpha$ -haloacetyl)-8-(substituted oxy)-(1H)-quinolin-2-one. For example, 8-hydroxy-(1H)-quinolin-2-one was reacted with Ac2O in 1,2-dichlorobenzene in the presence of AlCl3 to give 5-acetyl-8-hydroxy-(1H)-quinolin-2-one (82.0%). The above compound was reacted with PhCH2Br in acetone in the presence of diisopropylethylamine to afford 5-acetyl-8-benzyloxy-(1H)-quinolin-2-one (91.7%). The quinolinone obtained was treated with benzyltrimethylammonium dichloroiodate in AcOH to provide  $5-(\alpha-\text{chloroacetyl})-8-\text{benzyloxy}-$ (1H)-quinolin-2-one.

IT 753498-25-8P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of 5-(haloacetyl)-8-hydroxy-(1H)-quinolin-2-one derivs.)

RN 753498-25-8 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy-, (2Z)-2-butenedioate (1:1) (CA INDEX NAME)

CM 1

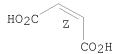
CRN 312753-06-3 CMF C24 H28 N2 O3

Absolute stereochemistry.

CM 2

CRN 110-16-7 CMF C4 H4 O4

Double bond geometry as shown.



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 71 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 141:260556 CA

TITLE: Process for preparing

5-[(R)-2-(5,6-diethylindan-2-ylamino)-1-hydroxyethyl]-

8-hydroxy-(1H)-quinolin-2-one salt useful as an

adrenoceptor agonist

INVENTOR(S): Lohse, Olivier; Vogel, Caspar

PATENT ASSIGNEE(S): Novartis Ag, Switz.; Novartis Pharma GmbH

SOURCE: PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PAT	ENT	ΝΟ.			KIN:	D	DATE			APPL	ICAT		DATE				
WO	2004	0764	22		A1		2004	0910	,	WO 2	004-		20040227				
							AU,										
							DE,										
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		LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI
	RW:	BW,	GH,	GM,	ΚE,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	ΑT,	BE,
		BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,	IE,	ΙΤ,	LU,
		MC,	NL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,
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	2517						2004						033			0040	
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US	7534	890			В2		2009	0519									

IN 2005CN02065 20070831 IN 2005-CN2065 20050826 Α NO 2005-4452 20050926 NO 2005004452 Α 20051128 PRIORITY APPLN. INFO.: US 2003-450945P P 20030228 WO 2004-EP1981 20040227 Α

OTHER SOURCE(S): CASREACT 141:260556; MARPAT 141:260556

A process for preparing 5-[(R)-2-(5,6-diethylindan-2-ylamino)-1-hydroxyethyl]-AΒ 8-hydroxy-(1H)-quinolin-2-one (I) salt. The process involves forming an acid salt of 5-[(R)-2-(5,6-diethylindan-2-ylamino)-1-hydroxyethyl]-8substituted oxy-(1H)-quinolin-2-one (II; R = a protecting group; A- = an anion) and converting the acid salt to a salt of I, i.e. II (R = H), without isolating the free base of I. Thus, 30.89 g 2-amino-5,6-diethylindan was dissolved in diethylene glycol di-Me ether, treated with 36.4 g 8-phenylmethoxy-5-(R)-oxiranyl-1H-quinolin-2-one, stirred at  $110^{\circ}$  for 15 h, cooled to  $70^{\circ}$ , treated with 210 mL EtOH and then with a solution of a solution of 30.3 g benzoic acid in 140 mL ethanol, cooled to  $45-50^{\circ}$ , seeded, cooled to  $0-5^{\circ}$ , and filtered to give, after recrystn. from EtOH, 5-[(R)-2-(5,6-diethylindan-2-ylamino)-1-hydroxyethyl]-8-phenylmethoxy-(1H)-1-hydroxyethyl]quinolin-2-one benzoate (III). III (40 g) was hydrogenated over 5% Pd on charcoal (5.44 g) in 400 mL AcOH for 2-8 h, filtered over a pad of filter aid, concentrated at  $50-60^{\circ}$  under vacuum (100 mbar) to a volume of 70-90mL, treated with 400 mL EtOH, heated to  $50-60^{\circ}$ , treated with a solution of 11.6 g maleic acid in 24 mL EtOH, seeded at 50° with a suspension of 350 mg micronized I in 20 mL isopropanol, and allowed to crystallize by slow cooling to  $0-5^{\circ}$ , and filtered, followed by washing with 50 EtOH and 25 mL isopropanol and recrystn. from 1.36 L EtOH, 24.3 g I maleate as a white crystalline powder.

IT 753498-41-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(process for preparing 5-[(R)-2-(5,6-diethylindan-2-ylamino)-1-hydroxyethyl]-8-hydroxy-(1H)-quinolin-2-one salt as adrenoceptor agonist)

RN 753498-41-8 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy-, benzoate (1:1) (CA INDEX NAME)

CM 1

CRN 312753-06-3 CMF C24 H28 N2 O3 Absolute stereochemistry.

CM 2

CRN 65-85-0 CMF C7 H6 O2

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 72 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 141:225161 CA

TITLE: Preparation of biphenyl derivatives as

 $\beta$ 2-adrenergic agonists and muscarinic antagonists

for pulmonary disorders.

INVENTOR(S): Mammen, Mathai; Dunham, Sarah; Hughes, Adam; Lee, Tae

Weon; Husfeld, Cralg; Stangeland, Eric

PATENT ASSIGNEE(S): Theravance, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 85 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040167167	A1	20040826	US 2004-779157	20040213
US 7141671	B2	20061128		
AU 2004213411	A1	20040902	AU 2004-213411	20040213
CA 2515777	A1	20040902	CA 2004-2515777	20040213
WO 2004074276	A1	20040902	WO 2004-US4224	20040213

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BR 2004007508
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US 7355046	B2	20080408				
US 2006022386	0 A1	20061005	US	2006-448317		20060607
US 2006022933	4 A1	20061012	US	2006-449004		20060607
US 7521561	B2	20090421				
US 2007003798	4 A1	20070215	US	2006-582885		20061018
US 7524959	B2	20090428				
US 2007008805	4 A1	20070419	US	2006-604607		20061127
US 7514558	B2	20090407				
JP 2007119496	A	20070517	JP	2007-31325		20070209
US 2007020817	6 A1	20070906	US	2007-788343		20070419
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US 2008001522	-	20080117		2007-888526		20070801
US 7507751	B2	20090324				
IN 2008DN0559		20080926	IN			20080627
IN 2008DN0934		20090619	IN	2008-DN9343		20081107
PRIORITY APPLN. IN	FO.:		US	2003-447843P	_	20030214
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			CN	2004-8000652		20040213
			JP	2006-503604	А3	
					A1	
			WO	2004-US4224	W	20040213
			WO	2004-US4273	W	20040213
			WO	2004-US4449	W	20040213
			IN	2005-DN3375	A3	
			US		A3	
			US	2006-448294	A1	20060607

OTHER SOURCE(S): GI

CASREACT 141:225161; MARPAT 141:225161

AB Title compds. I [R1 (taken 0-3 times) = alk(en/yn)yl, cycloalkyl, etc.; R2 (taken 0-3 times) = alk(en/yn)yl, cycloalkyl, CN, etc.; W = 0, substituted N; R3 (taken 0-4 times) = alk(en/yn)yl, cycloalkyl, etc.; R4 = divalent group; R5 = H, alkyl; R6 = amino, alkoxy, etc.; R7 = H, etc.] are prepared For instance, N-[1,1'-Biphenyl-2-yl]-N'-[1-(9-aminononyl)piperidin-4-yl]urea (preparation given) is combined with 8-Benzyloxy-5-(2,2-dihydroxyacetyl)-1H-quinolin-2-one (CH2Cl2, NaHB(OAc)3) and the product reduced (MeOH, H2-Pd/C) to give II. Selected example compds. have Ki < 10 nM for the  $\beta$ 2 and muscarinic receptor. I are useful in the treatment of pulmonary disorders, such as chronic obstructive pulmonary disease and asthma.

TT 743461-80-5P, Biphenyl-2-ylcarbamic acid
1-[2-[[[(1R,3S)-3-[[(R)-2-hydroxy-2-(8-hydroxy-2-oxo-1,2-dihydroquinolin-5-yl)ethyl]amino]cyclopentane-1-yl]carbonyl]amino]ethyl]piperidin-4-yl ester
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
 (Uses)

(preparation of biphenyl derivs. as  $\beta 2\text{--adrenergic}$  agonists and muscarinic antagonists for pulmonary disorders)

RN 743461-80-5 CA

CN Carbamic acid, [1,1'-biphenyl]-2-yl-,

1-[2-[[[(1R,3S)-3-[[(2R)-2-(1,2-dihydro-8-hydroxy-2-oxo-5-quinolinyl)-2-hydroxyethyl]amino]cyclopentyl]carbonyl]amino]ethyl]-4-piperidinyl ester

(9CI) (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 73 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 141:59702 CA

TITLE: Inhalant containing a combination of a tiotropium salt

and a  $\beta$ -mimetics for the treatment of COPD

INVENTOR(S): Konetzki, Ingo; Meade, Christopher J. Montague;

Pairet, Michel; Pieper, Michael P.

PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma GmbH & Co. KG, Germany

SOURCE: Ger. Offen., 22 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.			KIND DATE				APPLICATION NO.						DATE					
								20040617										
									CA 2003-2507656 WO 2003-EP12913									
WO																		
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OTHER SOURCE(S): MARPAT 141:59702

HO HN R1 
$$R^{1}$$
  $R^{2}$   $R^{3}$ 

AB The invention concerns a combination for the treatment of chronic obstructive pulmonary disease composed of a tiotropium salt, preferably tiotropium bromide, and a  $\beta$ -mimetic of the general formula (I), where R1, R2 = H, C1-4-alkyl; R3, R4 = H, C1-4-alkyl, O-C1-4-alkyl, C1-4-alkylene-O-C1-4-alkyl; or R3, R4 together are for a bridging group O-C1-4-alkylene or -O-C1-4-O-, or its salt. Inhalant powders, suspensions and solns. are prepared Thus an inhalant powder contained ( $\mu$ g/capsule): tiotropium bromide monohydrate 10.8; 5-[[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy-2(1H)-quinoline monohydrochloride 35; and lactose 4954.2.

Ι

IT 614751-12-1

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(inhalant containing combination of tiotropium salt and  $\beta\text{--mimetics}$  for treatment of COPD)

RN 614751-12-1 CA

CN 2(1H)-Quinolinone, 5-[2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy-, (2Z)-2-butenedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 312753-33-6 CMF C24 H28 N2 O3

CM 2

CRN 110-16-7 CMF C4 H4 O4

Double bond geometry as shown.

L8 ANSWER 74 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 139:341650 CA

TITLE: Medicaments containing betamimetic drugs and a novel

anticholinesterase drug for treating respiratory tract

diseases

INVENTOR(S): Banholzer, Rolf; Meade, Christopher John Montague;

Meissner, Helmut; Morschhaeuser, Gerd; Pairet, Michel;

Pieper, Michael P.; Pohl, Gerald; Reichl, Richard;

Speck, Georg; Konetzki, Ingo

PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G.,

Germany

SOURCE: PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATE	NT NO.	KIN	D DATE	APPLICATION NO.	DATE		
Σ	CO, CR, GM, HR, LS, LT, PH, PL, TZ, UA, RW: GH, GM, KG, KZ, FI, FR,	AL, AM, CU, CZ, HU, ID, LU, LV, PT, RO, UG, US, KE, LS, MD, RU, GB, GR,	AT, AU, AZ DE, DK, DM IL, IN, IS MA, MD, MC RU, SC, SI UZ, VC, VM MW, MZ, SI TJ, TM, AZ HU, IE, IZ	WO 2003-EP3669  BA, BB, BG, BR, BY, BZ,  JP, KE, KG, KP, KR, KZ,  MK, MN, MW, MX, MZ, NI,  SE, SG, SK, SL, TJ, TM,  JYU, ZA, ZM, ZW  SL, SZ, TZ, UG, ZM, ZW,  BE, BG, CH, CY, CZ, DE,  LU, MC, NL, PT, RO, SE,  GN, GQ, GW, ML, MR, NE,	GD, GE, GH, LC, LK, LR, NO, NZ, OM, TN, TR, TT, AM, AZ, BY, DK, EE, ES, SI, SK, TR,		
	0256317	A1 A1	2003102	DE 2002-10256317	20021203		
US 74 CA 24 AU 20 AU 20	417051 481468 003232201	B2 A1 A1 B2 A1	2008082 2003102 2003102 2009063	CA 2003-2481468 CA 2003-232201	20030409		
			DK, ES, F	24 R, GB, GR, IT, LI, LU, NL, K, CY, AL, TR, BG, CZ, EE,			
CN 16 AT 30 JP 20	16, 31, 003009185 646527 02774 005529111 586574	A A T T A1	2005021 2005072 2005091 2005092	BR 2003-9185 CN 2003-808330 AT 2003-746158 JP 2003-584053	20030409		
ES 22 NZ 53 ZA 20 NO 20 IN 20 MX 20	R: AT, BE, IE, SI, 248767 36337 004006881 004004107 004DN02916	LT, LV, T3 A A A A A	DK, ES, FF FI, RO, MR 2006033 2007053 2006062 2004110 2007043	R, GB, GR, IT, LI, LU, NL, CY, AL, TR, BG, CZ, EE, ES 2003-746158 NZ 2003-536337 RS ZA 2004-6881 NO 2004-4107 IN 2004-DN2916 DE 2002-10216428 DE 2002-10256317	SE, MC, PT, HU, SK 20030409 20030409 20040830 20040927 20040928 20041008 A 20020412 A 20021203		
OTHER SOUE	RCE(S):	MAR	PAT 139:341	EP 2003-746158 WO 2003-EP3669	P 20020605 A3 20030409 W 20030409		

<sup>\*</sup> STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention relates to novel medicament compns. based on long-acting  $\beta 2$  agonists and salts I·X- [X = simple anion (Cl, Br, I, sulfate, phosphate, O3SMe, NO3, maleate, OAc, citrate, fumarate, tartrate, oxalate, succinate, O2CPh, OTs)], of a novel anticholinesterase drug I, to

methods for the production of these compns. and their use in treating respiratory tract diseases. The invention also relates to the combination of I with one or more biomimetics II [R1, R2 = H, C1-4-alkyl; R3, R4 = H, C1-4-alkyl, O-(C1-4-alkyl), (C1-4-alkylene)-O-(C1-4-alkyl); R3R4 = C1-4-alkylene, O-(C1-4-alkylene)-O], their enantiomers, mixts., racemates, solvates, hydrates or with salmeterol, formoterol or their acid addition salts. Thus, an example inhalation powder formulation comprises I·Br- and II·HO2CCH:CHCO2H-(Z) (R1 = R2 = H, R3 = R4 = Et) and lactose.

IT 614751-12-1P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(betamimetic drug; medicaments containing betamimetic drugs and a novel anticholinesterase drug for treating respiratory tract diseases)

RN 614751-12-1 CA

CN 2(1H)-Quinolinone, 5-[2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy-, (2Z)-2-butenedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 312753-33-6 CMF C24 H28 N2 O3

CM 2

CRN 110-16-7 CMF C4 H4 O4

Double bond geometry as shown.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 75 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 137:37642 CA

TITLE: Preparation and formulation of a quinolinone compound for treatment of airway disorders

INVENTOR(S): Cuenoud, Bernard; Fairhurst, Robin Alec; Lowther,

Nicholas

PATENT ASSIGNEE(S): Novartis A.-G., Switz.; Novartis-Erfindungen

Verwaltungsgesellschaft mbH; Novartis Pharma GmbH

SOURCE: PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT NO.					KIND DATE			APPLICATION NO.						DATE				
WO				A2 20020613									20011203					
WO	2002045703				A3		2003	BA, BB, BG, BR, BY, BZ,										
	W:																	
							DK,											
							IS,											
							MX,					•					SE,	SG,
							TT,											
	RW:				CY,	DE,	DK,	ES,	FI,	FF	₹,	GB,	GR,	IE,	IT,	LU,	MC,	NL,
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WO 2001-EP14122 W 20011203 US 2003-433546 A1 20030604 US 2004-911201 A3 20040804

OTHER SOURCE(S): MARPAT 137:37642

GΙ

AB An inhalation composition comprises, sep. or together, (A) a quinolinone compound

Ι

(I) in free or pharmaceutically acceptable salt or solvate form and (B) a corticosteroid, useful for simultaneous, sequential or sep. administration in the treatment of an inflammatory or obstructive airway disease. The molar ratio of (A) to (B) is from 100:1 to 1:300. A composition is an aerosol or a dry powder in a capsule. For example, an aerosol formulation was prepared by dispensing 10 parts of micronized I maleate, 10 parts of mometasone furoate, and 100 parts of lactose (bulking agent) into a vial, sealing the vial with a metering valve, injecting the premix of 2500 parts of ethanol, 30,500 parts of propellant HFA134a, 67,000 parts of propellant HFA227, and 0.5 parts of oleic acid (surfactant) into the vial through the valve, and subjecting the vial to ultrasonic energy to disperse the solid particles.

IT 312753-06-3P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation and quinolinone compound and its formulation with corticosteroid

for treatment of airway disorders)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 76 OF 76 CA COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 134:42074 CA

TITLE: Preparation of indanyl-substituted quinolinone

derivatives as  $\beta 2$ -adrenoceptor agonists

INVENTOR(S): Cuenoud, Bernard; Bruce, Ian; Fairhurst, Robin Alec;

Beattie, David

PATENT ASSIGNEE(S): Novartis A.-G., Switz.; Novartis-Erfindungen

Verwaltungsgesellschaft m.b.H.

SOURCE: PCT Int. Appl., 61 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT NO.					KIND DATE		APPLICATION NO.						DATE				
WO 2000075114					A1	20001214			WO 2000-EP5058						20000602		
	W:	ΑE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CR,
		CU,	CZ,	DE,	DK,	DM,	DZ,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	GM,	HR,	HU,
		ID,	IL,	IN,	IS,	JP,	KΕ,	KG,	KP,	KR,	KΖ,	LC,	LK,	LR,	LS,	LT,	LU,
		LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	NΖ,	PL,	PT,	RO,	RU,	SD,
		SE,	SG,	SI,	SK,	SL,	ТJ,	TM,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VN,	YU,
		ZA,	ZW														
	RW:	GH,	GM,	KΕ,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZW,	ΑT,	BE,	CH,	CY,
		DE,	DK,	ES,	FΙ,	FR,	GB,	GR,	ΙE,	ΙT,	LU,	MC,	NL,	PT,	SE,	BF,	ВJ,
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-	2375	-							CA 2000-2375810								
									BR 2000-11324								
EP	1183						2002										
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AU	765919	В2	20031002	AU	2000-50745		20000602
NZ	515669	A	20040130	NZ	2000-515669		20000602
CN	1156451	С	20040707	CN	2000-808487		20000602
RU	2244709	C2	20050120	RU	2001-135801		20000602
${\tt IL}$	146578	A	20070515	IL	2000-146578		20000602
IN	2001CN01673	A	20070622	ΙN	2001-CN1673		20011128
ИО	2001005912	A	20020121	ИО	2001-5912		20011203
ИО	322944	B1	20061218				
ZA	2001009931	A	20020605	ZA	2001-9931		20011203
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US	6878721	B1	20050412	US	2002-9008		20020108
US	20050153957	A1	20050714	US	2005-74400		20050307
PRIORITY	APPLN. INFO.:			GB	1999-13083	Α	19990604
				WO	2000-EP5058	W	20000602
				US	2002-9008	АЗ	20020108

OTHER SOURCE(S):

MARPAT 134:42074

GΙ

The title compds. I [Ar = Q; R1 = H, OH, alkoxy; R2, R3 = H, alkyl; R4-R7 = H, halo, cyano, aryl, etc.; R8 = halo, OR13, etc.; R9 = H or part of a heterocycle; R10 = OR19, NHR19, etc.; X = halo, halomethyl, alkyl; Y = C, N; n = 1, 2; p = 0, 1; q, m = 0, 1],  $\beta$ 2-adrenoceptor agonists, were prepared E.g., 5-[2-(5,6-dimethoxyindan-2-ylamino)-1-hydroxyethyl]-8-hydroxy-1H-quinolin-2-one was prepared IT 312753-06-3P

312753-06-3P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of indanyl-substituted quinolinone derivs. and related compds. as  $\beta 2$ -adrenoceptor agonists)

RN 312753-06-3 CA

CN 2(1H)-Quinolinone, 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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